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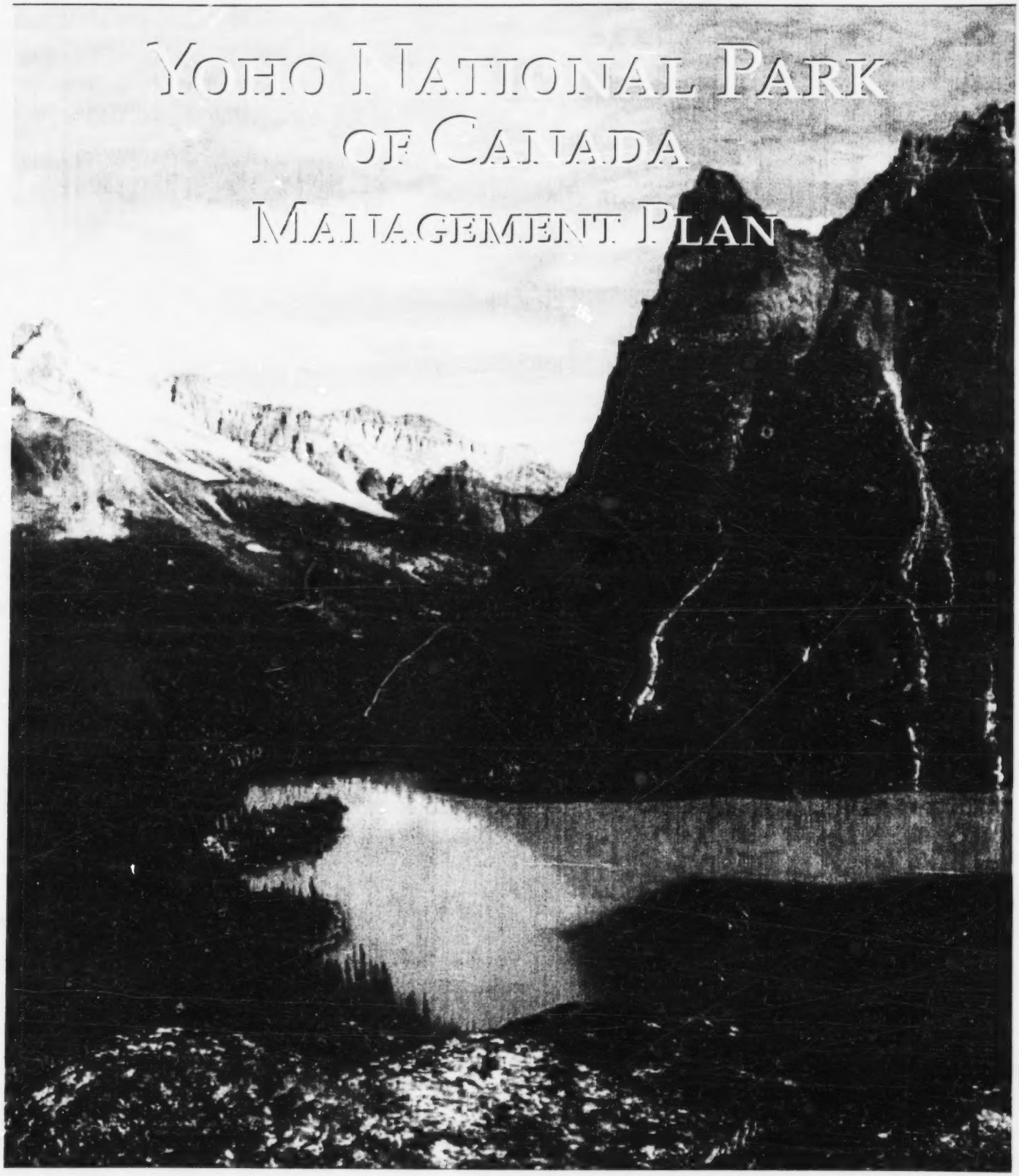
Yoho National Park of Canada Management Plan



Parks Canada Parcs Canada

Canada

Yoho National Park of Canada

Management Plan

May 2000

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Foreword

Protection of the ecological integrity and cultural resources of the Rocky Mountain national parks, for the appreciation and enjoyment of current and future generations, is one of our nation's greatest responsibilities. It is something we owe both to ourselves and to the world, which has bestowed world heritage site designations on these parks.

In 1997, I approved the Banff National Park Management Plan. This management plan for Yoho National Park of Canada builds on the key themes and principles of the Banff Plan. National parks are, first and foremost, places for nature and will remain so. They must continue to be places for people and for heritage tourism, places to visit, to experience and to learn. These parks are also places for community and for the highest standards of environmental stewardship. Finally, national parks are places where management is open and transparent.

The Rocky Mountain national parks are closely linked from an ecological and visitor use perspective. Thus, the Yoho National Park of Canada Management Plan was developed in concert with the new management plans for Kootenay, Jasper and Waterton Lakes national parks. The management plans outline the key tools we need to meet the challenges facing these special places: a better understanding of the immediate and long-range ecological pressures; a better way to integrate commercial and tourist activities in this magnificent, finite environment; and a higher level of local and national input in decision making.

The Yoho National Park of Canada Management Plan was prepared through extensive public consultation. It provides a shared vision to guide the park into the 21st century; setting the groundwork for action over the next 15 years.

The community of Field lies at the heart of Yoho National Park of Canada. In June 1998, I announced principles to guide the management of national park communities. This management plan provides a framework for how these principles of no net negative environmental impact, appropriate use, responsible growth management, and leadership in environmental and heritage conservation will be applied to the community of Field. The management plan ensures that the management of the community of Field is integrated with the management of the park, a community where the protection of the park's ecological integrity and cultural resources is the primary consideration. Field is a model community reflecting the surrounding natural environment, national park values and its cultural heritage.

The Government of Canada is committed to the protection and presentation of our natural and cultural heritage and, as Minister of Canadian Heritage responsible for Parks Canada, it is my duty to safeguard our national parks. It is in keeping with this mandate that I approve the Yoho National Park of Canada Management Plan.

Sheila Copps
Minister of Canadian Heritage

102-00072/

Yoho National Park of Canada Management Plan

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Yoho National Park of Canada MANAGEMENT PLAN

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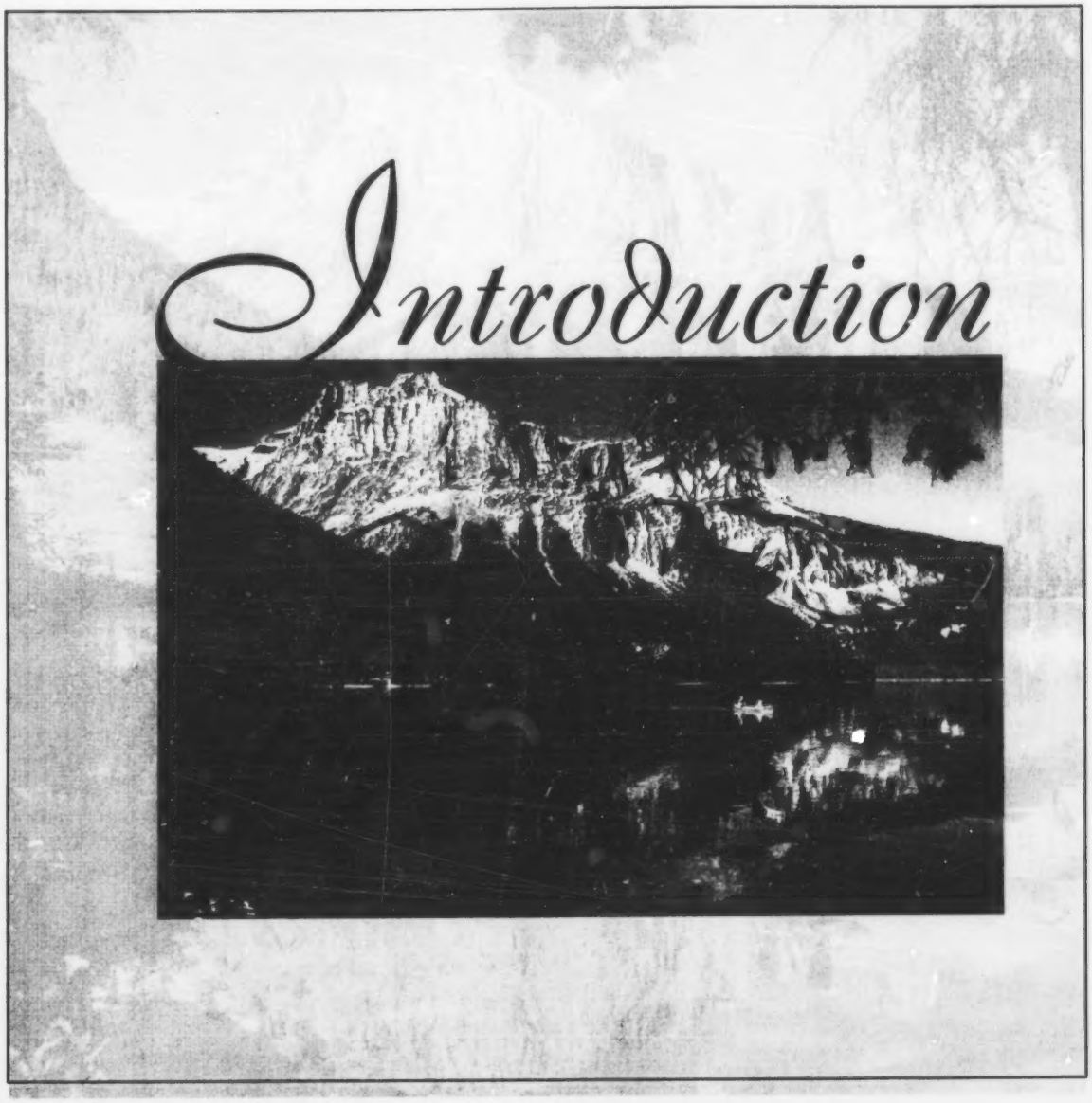
A Vision for Yoho National Park of Canada

Yoho National Park of Canada is a symbol of Canadian identity and pride, recognized within Canada and around the world as an ecologically diverse place. It is a place where complex land use and development challenges are managed in ways that allow nature and natural processes to flourish and evolve. It embodies a rich record of natural and cultural heritage that is respected and celebrated by all who know about, live in and visit this special place. The park is accessible to the public and supports a range of opportunities that are based on national park values and that foster understanding, enjoyment and support. It is managed as a protected area that works in harmony with others beyond its boundaries to sustain ecosystems in the regional landscape. Canadians and international guests appreciate the ecological and cultural importance of the park to the region, the country and the world.

Key Themes

- The park is a living example of the way in which nature is protected while appropriate kinds and levels of human activity are welcomed (see table 3. Appropriate Use Criteria).
- The park contributes to a healthy and sustainable region.
- Natural systems and their component native species are free to function and evolve. The park supports and is supported by the natural systems of the region around it.
- The park is available to all Canadians and international guests who wish to participate in a diverse range of appropriate activities. They treat the park with respect. The quality of the natural environment and services provided is fundamental to the visitor experience.
- Understanding the value of our national parks is a part of being Canadian. Education and awareness about the values of the national park, ethics of stewardship, natural and cultural heritage and services are provided both within and beyond the boundaries of the park.
- A healthy economic climate, based on the heritage values of the park, contributes to national, provincial and local economies. Appropriate businesses evolve and operate along aesthetically pleasing and environmentally responsible lines. Innovative ideas, designs and technology related to education, transportation, waste management, and other infrastructure are emphasized when providing services.
- Federal, provincial and municipal authorities cooperate in protecting and managing the regional ecosystem. To achieve this, they nurture cooperation with businesses, organizations, and open, accountable, and responsible decision-making.
- Principles of precaution and adaptive management are exercised when potentially significant adverse effects on the ecosystem are uncertain.
- The community of Field is a leader in environmental and cultural resource stewardship. Residents and businesses pride themselves in accepting their responsibility for protecting and sharing this natural and cultural heritage for the benefit of present and future generations.
- Recognizing the finite supply of facilities and services, the park plays an active role through the heritage tourism strategy in influencing marketing and promotion efforts that affect demand on the park.
- Parks Canada anticipates regional pressures and prepares for them well in advance.
- Success in implementing management plan actions is measured against established targets.



1.0 INTRODUCTION

1.1 A Park of Many Places

The story of Yoho National Park of Canada is the story of the Rocky Mountains—their creation, their evolution as a result of natural processes, their colonization by flora and fauna, and finally their protection and use. This is a special place where the protection of mountain ecology and culture is paramount. The Kicking Horse Heritage River, the history of the national transportation corridor, outstanding geological resources including the Burgess Shale, historic sites, and exceptional backcountry opportunities define the unique heritage character of Yoho National Park of Canada.

Yoho's importance extends well beyond the park boundary. The park is part of a network of protected areas in the Central Rockies Ecosystem. Along with its mountain park neighbours and three adjacent provincial parks, it makes up

UNESCO's Canadian Rocky Mountain Parks World Heritage Site—20,000 km² of some of the most spectacular and ecologically significant areas in the Canadian Rocky Mountains.

This management plan recognizes that Yoho National Park of Canada is not one place, but many places. It is, above all, a place for nature—where the intricate relationships that make up the web of life continue to evolve as they have for thousands of years. It is a place where people can discover the wonder of the natural environment and appreciate, first hand, the richness of their heritage. It is a place that recognizes and celebrates the past. It is a place where people recognize their role in the ecosystem and their responsibility to act accordingly. And finally, it is a place for the future. The *National Parks Act* dedicates national parks *"to the people of Canada for their benefit, education and enjoyment...to be maintained and made use of so as to leave them unimpaired for future generations"*. This management plan is a key tool for shaping that future.

1.2 Management Planning in the Mountain Parks

The *National Parks Act* requires each of Canada's 39 national parks to prepare a management plan, and, in consultation with Canadians, to update the plan every five years. In 1988, the federal minister responsible for Parks Canada tabled the first management plans for Yoho, Banff, Kootenay, and Jasper National Parks of Canada in Parliament. These plans were the result of nation-wide public consultation and in-depth analysis of the social, economic and environmental conditions facing each park. Since 1988, these four parks have addressed the plans' priorities and many changes have taken place.

A review of the plans began in 1993, but was postponed until 1996 when the Banff-Bow Valley Task Force submitted more than 400 recommendations concerning protection of the Bow Valley corridor in Banff. After careful assessment of these recommendations, Parks Canada prepared a new management plan for Banff National Park of Canada. The revised management plans for Yoho, Kootenay, Jasper, and Waterton Lakes incorporate key principles and policy direction from the Banff plan.

Other important changes have occurred since the completion of the parks' first management plan. New issues have emerged. Governments have set new policies and drafted new legislation. Researchers have improved our understanding of the critical importance of ecosystem-based management and biodiversity. Tourism has increased rapidly, along with an interest in destinations that offer opportunities to learn about nature and history.

The following are examples of new legislation, policies, plans and studies that Parks Canada has considered in drafting the management plan.

- amendments to the *National Parks Act* (1988).
- the *Strategic Framework to Sustain the Integrity of Ecosystems* (Parks Canada 1992).
- the Biodiversity Convention (1992).
- the British Columbia Treaty Process (1994).
- *Parks Canada: Guiding Principles and Operational Policies* (1994).
- the *Canadian Environmental Assessment Act* (1995).
- *Banff-Bow Valley: At the Crossroads (1996).*
- the *Banff National Park Management Plan* (1997).

Yoho National Park of Canada Management Plan

Yoho's revised management plan will guide the overall direction of the park for the next 10 to 15 years. The objectives of the plan are to:

- set out a vision for the future;
- preserve and strengthen the ecological integrity of the park in a way that integrates ecological, social, and economic values;
- promote high quality visitor experiences based on the parks ecological and cultural heritage;
- establish clear limits to development associated with appropriate activities;
- support Parks Canada's initiative to renew heritage presentation; and
- involve others in protecting the shared ecosystem.

The public played a key role in shaping the revised management plan. Open houses in several communities attracted hundreds of participants. Parks Canada also distributed more than 1,500 management plan concepts to the public for

comment. On-going consultations with stakeholders, including the Government of British Columbia, have also provided valuable insight.

1.3 First Nations

Yoho is part of an area identified by the Ktunaxa and Shuswap Nations as their traditional territories. The Ktunaxa Nation, British Columbia, and the federal government are negotiating a treaty that includes "Parks and Protected Areas" and "cultural resources" as a subject for negotiation. This management plan contains important direction concerning ongoing collaboration with First Nations to protect and present Aboriginal heritage.

1.4 Cornerstones of Success

Parks Canada will have realized the vision for Yoho National Park of Canada when the following strategic goals become a reality. Each chapter in this management plan describes objectives and key actions to make that happen. Map 1 summarizes the management plan's key actions.

A Place for Nature

Canadians understand the challenges involved in maintaining the ecological integrity of Yoho National Park of Canada.

Biological diversity exists at a variety of scales—genetic, species, community, landscape.

Air quality is of the highest possible standard.

Natural processes, including erosion and deposition, shape the landscape and its ecosystems.

The natural structure and function of aquatic and terrestrial ecosystems are maintained.

Natural processes determine the long-term composition and structure of vegetation.

The regional ecosystem supports viable populations of native wildlife.

A Place of Historical, Cultural and Palaeontological Significance

Important cultural resources are protected and the associated themes presented.

Parks Canada and Aboriginal people collaborate on the protection and presentation of Aboriginal heritage in Yoho National Park of Canada.

The Burgess Shale is protected and presented.

The natural, historical and recreational values that led to the nomination of the Kicking Horse River as a Canadian Heritage River are safeguarded.

A Place for People

Canadians and their international guests appreciate and understand the nature and history of Yoho National Park of Canada and the role the park plays in Canada's national park system and the Canadian Rocky Mountain Parks World Heritage Site.

Appropriate facilities and services allow visitors with varying interests to enjoy the park.

Information is available to help visitors make informed choices about appropriate park use.

Visitors experience the park without impairing its ecological integrity and important cultural resources.

Ecological and social objectives are met by assessing and managing human use in each landscape management unit.

Integrated ecological and visitor experience objectives are achieved for each landscape management unit.

Canadians and their international guests enjoy high quality, authentic learning and travel experiences that are based on national park values and that bolster a sense of Canadian identity.

A well-informed tourism industry respects the ecological and social values of Yoho National Park of Canada.

Transportation and Utilities

National transportation corridors and secondary roads are managed in a way that supports Parks Canada's commitment to ecological integrity and enables visitors to experience the park.

The impact of aircraft on ecological integrity and the visitor experience is kept to a minimum.

Utilities have minimal impact on the park's ecological integrity and the visitor experience.

A Place for Community—Field

The community is managed in a way that ensures there is no net negative environmental impact on adjacent park land.

Appropriate basic and essential visitor services reinforce national park values.

Growth is limited.

The community shows leadership in environmental stewardship and heritage conservation.

Open Management

Key policy, land-use and planning decisions are timely, fair and consistent, and are arrived at in an open and participatory manner.

Ecological, social and economic systems in the park and greater ecosystems benefit from integrated management.

Research and information, shared among agencies and individuals in the East Kootenays and Central Rockies Ecosystem, support sound decision making.

The Development Review Process ensures the consistent application of guidelines and public input to all development, including major renovations, in Yoho National Park of Canada.

Appropriate use is evaluated using clear criteria that respect the mandate as described in the National Parks Act and Parks Canada's policy framework.

Environmental Stewardship

Environmental stewardship supports ecological integrity and heritage tourism, and sets a standard of excellence.

Parks Canada demonstrates sound environmental practices in all its activities, services and products.

Environmental stewardship is fundamental to the operation of all businesses and institutions.

Visitors and residents contribute to the principles of environmental stewardship and sustainability.

In the long term, effluent targets match, as closely as possible, the natural composition of receiving waterbodies.

Sewage from facilities that are not connected to a treatment plant have minimal environmental impact.

Ecosystem-Based Management

One of the biggest questions for national parks is how to maintain a healthy environment and protect important cultural resources while at the same time supporting quality visitor experiences and contributing to social and economic needs. To address this challenge, Parks Canada has adopted an approach known as "ecosystem-based management".

Ecosystem-based management is a holistic approach that involves working with others to achieve common goals. Productive, positive, long term relationships are the key to its success. Multi-disciplinary in nature, it seeks to integrate biological, physical and social information. The goal—a healthy park, environmentally, socially and economically, within a broader regional landscape.

The following key components are the foundation for ecosystem-based management.

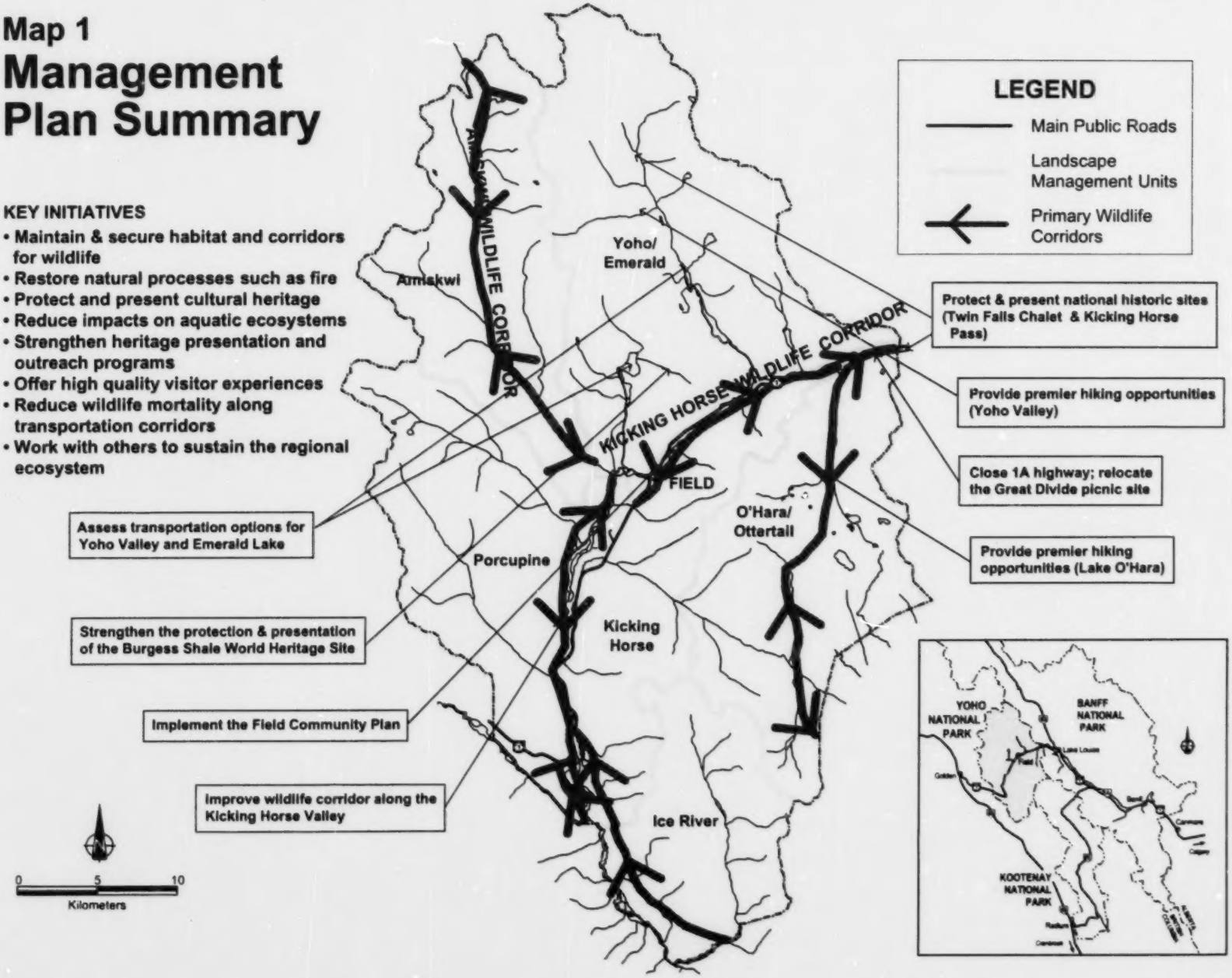
- *Ecosystems extend beyond park boundaries. Activities on neighbouring lands affect the park's wildlife, air, water, and vegetation. By the same token, park activities affect our neighbours. Integrated management is essential.*
- *People are a fundamental part of the ecosystem. Addressing people's social and economic needs makes it possible for them to contribute to a healthy environment. Inside the park, these needs must be considered in the context of protecting ecological and cultural heritage. Outside the park, Parks Canada will encourage activities that incorporate heritage values.*
- *Understanding the relationship between people and the environment is the foundation of good decisions. In pursuit of this understanding, we can derive inspiration from the human-land relationship of Canada's Aboriginal Peoples.*
- *Visitor use respects the importance of protecting ecological and cultural resources. Parks Canada must carefully manage visitor use and development, setting limits where necessary.*
- *Decisions are based on sound information (ecological, cultural and social). Benchmarks and parameters help us understand the park's health.*
- *Consulting with visitors, residents, businesses and other government agencies is a key component in maintaining ecological integrity, protecting our cultural heritage, and offering opportunities to enjoy quality experiences.*
- *Educational programs for visitors, residents, and businesses, inside and outside the park, create awareness of ecosystems, the challenges involved in protecting them, and the role people can play.*
- *Natural processes, and where appropriate, technology are important in maintaining and restoring ecosystems.*

The management plan is founded on these ecosystem management components. While individual chapters address different issues, the actions in each are linked. Collectively they represent an integrated approach that Parks Canada believes will ensure Yoho National Park of Canada continues as a living example of national park values.

Map 1
Management Plan Summary

KEY INITIATIVES

- Maintain & secure habitat and corridors for wildlife
- Restore natural processes such as fire
- Protect and present cultural heritage
- Reduce impacts on aquatic ecosystems
- Strengthen heritage presentation and outreach programs
- Offer high quality visitor experiences
- Reduce wildlife mortality along transportation corridors
- Work with others to sustain the regional ecosystem


LEGEND
Main Public Roads
Landscape Management Units
Primary Wildlife Corridors
Protect & present national historic sites (Twin Falls Chalet & Kicking Horse Pass)
Provide premier hiking opportunities (Yoho Valley)
Close 1A highway; relocate the Great Divide picnic site
Provide premier hiking opportunities (Lake O'Hara)
Assess transportation options for Yoho Valley and Emerald Lake
Strengthen the protection & presentation of the Burgess Shale World Heritage Site
Implement the Field Community Plan
Improve wildlife corridor along the Kicking Horse Valley
Amiskwi
Yoho/ Emerald
KICKING HORSE WILDLIFE CORRIDOR
FIELD
O'Hara/ Ottertail
Porcupine
Kicking Horse
Ice River
0 5 10
Kilometers
YOHO NATIONAL PARK
BANFF NATIONAL PARK
KOOTENAY NATIONAL PARK

2.0 PLANNING CONTEXT

2.1 Regional Setting

Yoho National Park of Canada, an area of 1,300 km² on the western side of the Continental Divide, shares boundaries with Banff and Kootenay National Parks. The Trans-Canada Highway and the Canadian Pacific Railway follow the Kicking Horse River valley through the park.

Because of its size and the fact that it was not originally set aside to protect ecosystems, Yoho must rely on the cooperation of other agencies in the region to achieve its mandate of protecting ecological integrity. Part of the Central Rockies Ecosystem, Yoho is closely linked with neighbouring lands in British Columbia. Major valleys, such as the Blaeberry, Kicking Horse, and Beaverfoot are particularly important as habitat and wildlife corridors. A variety of federal, provincial, and municipal agencies, often with very different mandates, oversee land use outside the park.

2.2 The Community of Field

Field, a community of 300 people is located in the heart of Yoho National Park of Canada and is subject to the *National Parks Act* and regulations. The federal government has responsibility for planning, land use, development, and environmental issues. Parks Canada, with the involvement of the Field Community Council and in consultation with the public, has recently completed the *Field Community Plan*. This plan has been approved by the Minister of Canadian Heritage (July, 1999) and is considered part of the park management plan.

2.3 Park Management and Land Use

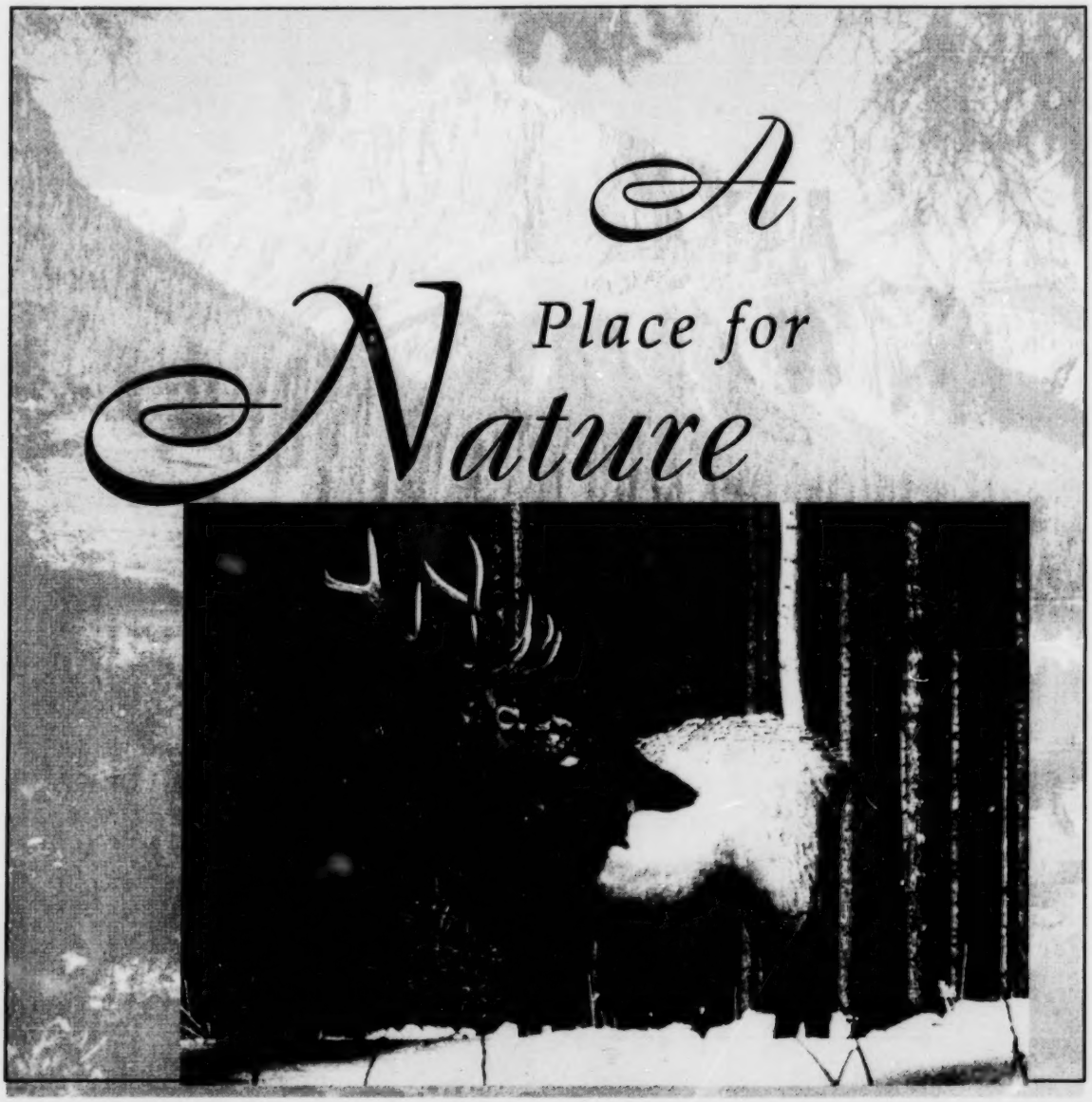
The evolution of park management has manifested itself in several areas. In the formative years of the park, the emphasis was on tourism. Many of the outlying tourist facilities were built at that time. Concern about protection was limited.

Many activities sanctioned by former policies are no longer considered appropriate in national parks. In fact, many of the park's current efforts are aimed at restoring systems radically altered as a result of former policies, particularly policies on hunting and fire suppression. Although hunting was prohibited from the time of the park's establishment, it was not until much later that predator control programs ended. Fire suppression in Yoho National Park of Canada has interfered with fire's critical link in the natural evolution of the environment, favouring the growth of conifer forests to the detriment of other habitats such as grassland and trembling aspen stands. Today park managers have a better understanding of the importance of natural processes such as fire to ecological integrity. Protection is based on a much broader ecological view and with increasing human use demands new approaches.

2.4 Human Use

The number of visitors to Yoho National Park of Canada has grown steadily over the last two decades, a trend that promises to continue. More residents and tourism development in neighbouring communities, growth in regional and international tourism, and ease of access have all contributed to this increase.

Yoho is a main destination for visitors to southeastern British Columbia and a gateway to the four mountain parks for east-bound travelers. The park is an important economic catalyst in the East Kootenays, particularly for the communities of Field and Golden. Golden's adventure tourism sector is growing significantly.



3.0 A PLACE FOR NATURE

3.1 Overview

"Maintenance of ecological integrity through the protection of natural resources shall be the first priority when considering park zoning and visitor use in a management plan".

National Parks Act, 1988

Parks Canada defines ecological integrity as *"a condition where the structure and function of an ecosystem are unimpaired by stresses induced by human activity and are likely to persist"*. (*Parks Canada: Guiding Principles and Operational Policies*, 1994). In other words, a national park has ecological integrity if all the plants and animals that should be in the park still thrive

there, and people use the park and its surroundings in ways that respect the needs of those plants and animals and allow fires, floods, weather and other natural processes to create natural habitat.

Ecological integrity is measured in terms of:

- ecosystem health, including the ability to evolve, develop, and adapt to change;;
- biological diversity, including the ecological and evolutionary processes that keep species functioning
- the ability of plant and animal communities to resist or adapt to stresses and change;
- the ability of plants and animals to sustain healthy populations; and
- the integration of people into the environment in ways that sustain both human quality of life and ecological diversity.

3.2 Threats to Ecological Integrity

Development, park management actions, and a variety of other activities, inside and outside the park, threaten ecological integrity in Yoho National Park of Canada.

Park Management Practices

Most park management practices influence the well-being of park ecosystems. Water and waste management, flood and fire protection, and vegetation management modify natural processes, putting stress on ecosystems.

Vegetation Change

In general, Yoho National Park of Canada's vegetation is becoming less diverse and more artificial, largely because of fire suppression and the invasion of non-native species. Fewer, smaller fires have meant a gradual aging of forests, significant accumulations of forest fuels, and a loss of important wildlife habitat.

Exotic Organisms

Non-native species have become established due to deliberate introductions or accidental releases. These species have a competitive advantage because they arrived in this area without a full complement of parasites, diseases, predators and other factors that control populations of native species. Some exotic species hybridize with native species. Others are effective predators or carry diseases to which native species lack natural defenses. Some compete with native species and take over.

Habitat fragmentation and wildlife displacement in the greater park ecosystem

Resource harvesting in the region surrounding the park has reduced habitat effectiveness for some species of wildlife. Industrial access increases activity in once-remote wildlife ranges and leads to greater recreational use of adjacent areas of the park. Animals such as grizzly bears and elk suffer habitat loss or displacement when roads and development proliferate.

The Trans-Canada Highway, park roads, and the railway fragment the landscape and, in some cases, block wildlife movement.

The community of Field and some of the park's extensive recreational infrastructure—picnic areas, parking lots, hiking trails, campgrounds, scenic viewpoints—are located in important wildlife habitat or areas subject to flooding and other natural processes. This infrastructure gives park visitors unparalleled opportunities to experience and learn about nature. The challenge is to ensure that development does not fragment and degrade the natural systems people come here to visit.

Threats to wide-ranging carnivores (e.g., grizzly bear, wolf, lynx)

Large carnivores are highly valued by most visitors and local residents. The continuing existence of these species indicates functioning landscapes, productive habitats, and human understanding and tolerance. These animals need large home ranges and more habitat diversity than the park can provide. Many animals range across jurisdictional boundaries into areas where they are not protected by park acts and regulations. The World Wildlife Fund's Carnivore Conservation Strategy and the Yellowstone-to-Yukon Conservation Initiative place a high priority on the conservation of large carnivores in the region.

Degradation of Aquatic Ecosystems

Reservoirs, flood control, highway and railway construction, and the introduction of non-native fish have altered aquatic resources and the natural flow of many streams in the park. The health of some native fish, aquatic invertebrates, and riparian habitats has declined as a result of these changes.

Wildlife Habituation

Animals respond to changes in their environment. As human use of the park and the surrounding landscape intensifies, and as we modify wildlife habitats and displace predators, some species of animals adapt to the changes in ways that generate conflict. Conflicts between wildlife and humans, and the associated management actions, often result in wildlife mortalities. Sensitive wildlife avoid areas where there are many people, limiting the amount of habitat available to them.

The underlying cause of most threats is related to the impacts of human use. This reinforces the need to manage human use within the park and to work with others beyond park boundaries to maintain the health of park ecosystems.

The park is addressing many of these threats. Measures include improved garbage management, an end to fish stocking, closing backcountry roads, temporary and permanent area closures to protect sensitive wildlife species, plans for improved sewage treatment, introduction of prescribed fires, progress on control of non-native plants, and interjurisdictional cooperation in environmental management. These undertakings will provide a strong base for future restoration, maintenance and management.

3.3 A Vision for Ecological Integrity

Yoho National Park of Canada protects and maintains the native biological diversity of this portion of the Rocky Mountains. The park is a living example of the way in which ecological values are protected in a place where appropriate kinds and levels of human activity are welcome. The park's ecosystems and their component native species and natural processes are free to function and evolve. The park supports and is supported by the natural ecosystems of the region around it.

To maintain the park's ecological integrity in a changing world, Parks Canada will focus on:

- promoting and cooperating in scientific studies that add to our knowledge of ecological integrity in the park and surrounding landscape and investigating the ways in which human activities influence the ecosystem;
- managing or reducing stressors that reduce biological diversity or impair ecosystem health;
- applying ecosystem-based management principles in decision making;
- restoring ecological processes, with priority given to those actions which have the potential for significant ecological benefit;
- collaborating with other land managers, neighbouring landowners and interested public organizations to promote ecosystem sustainability and an informed human community in the Central Rockies and East Kootenay ecosystems; and
- increasing understanding and appreciation of ecosystem processes, landscape history and conservation issues, and opportunities for stewardship among the community of people who visit, occupy or use Yoho National Park of Canada and surrounding landscapes.

3.4 Communicating the Need for Ecological Integrity

Ecological integrity depends on informed choices by people whose behaviour and decisions influence virtually every ecosystem on Earth. For this reason, Parks Canada has made communication an integral component of every strategic goal in this management plan. This section highlights specific actions to help people understand ecological integrity and its implications. Other chapters, especially *A Place for People*, describe additional communication initiatives.

3.4.1 Strategic Goal

Canadians understand the challenges involved in maintaining the ecological integrity of Yoho National Park of Canada.

3.4.2 Objectives

To reach broader audiences with key ecological integrity messages by sharing this responsibility with others.

To ensure Canadians value the park as part of an integrated network of protected areas within a regional ecosystem.

3.4.3 Key Actions

1. Develop a communications program about ecological integrity that:
   - targets key audiences;
   - involves park staff, researchers, residents, and park businesses;
   - presents information on key ecosystem issues; and
   - encourages shared responsibility for stewardship.
2. Present the following messages:
   - the complexity and dynamic nature of ecosystems;
   - Yoho's role in sustaining the environmental, social and economic health of the East Kootenays and Central Rockies Ecosystems and as an ecological benchmark for these ecosystems; and
   - the importance of ecosystem-based management.
3. Emphasize opportunities to see and learn about significant components of the park's ecosystem.
4. Expand the park's web site to include information on research and ecological integrity.
5. Prepare issue specific communication strategies related to wildlife mortality, regional wildlife corridors, aquatic resources, prescribed fires, environmental stewardship.

3.5 Shared Regional Ecosystems

Yoho National Park of Canada is inseparable from the lands that surround it. Because of its size, configuration and the fact that it was not originally set aside to protect ecosystems, regional cooperation is critical if Yoho is to achieve its objectives for ecological integrity and biodiversity. Given this context, the park's goal for ecological integrity must be realistic. Our goal is to sustain existing levels of integrity and to work towards improvements where possible.

3.5.1 Strategic Goal

Integrated planning and management in the East Kootenay and Central Rockies Ecosystems.

3.5.2 Objectives

To build relationships and share information among the agencies, individuals, and interest groups in the regional ecosystem.

To work towards common goals.

3.5.3 Key Actions

See also Section 8.5—Regional Coordination

1. Work with the Central Rockies Ecosystem Interagency Liaison Group (CREILG) and the British Columbia Interagency Management Committee (IAMC) to address priorities for research, education and management on a regional ecosystem basis.
2. Work with land managers in British Columbia to improve wildlife connectivity between the park and neighbouring lands, including the Upper Blaeberry, Beaverfoot and Kootenay River valleys.
3. Work with the Rocky Mountain Grizzly Bear Planning Committee to conserve and manage grizzly bears at inter-regional and international scales.
4. Increase the park's involvement in local and regional land use decisions in the East Kootenay region (e.g., implementation of the East Kootenay Boundary Land Use Plan).
5. Participate with the Ministry of Forests in timber supply reviews and forest management planning.

6. Pursue joint research that addresses regional ecosystem issues (e.g., West Slopes Bear Research).
7. Work with other land management agencies to reduce the number of roads adjacent to park wilderness areas and in key areas throughout regional ecosystems, particularly in the upper Beaverfoot and the Upper Blaeberry.
8. Work with provincial and federal agencies to monitor the impact of industrial activity, especially timber cutting, on hydrology and water quality in the Beaverfoot River system.
9. Support GIS and research initiatives that focus on landscape change.

3.6 Biological Diversity

A park's biodiversity is a key element of ecological integrity. The best way to protect ecological integrity is by maintaining natural biodiversity. There are several types of biological diversity including: genetic, species, community and landscape. Each requires special attention to ensure its continuing viability.

- landscape diversity includes all ecosystems in an area, plant and animal communities, and the physical habitat.
- community diversity encompasses all the species living together in a particular habitat.
- species diversity refers to the variety of plants and animals in an area.
- genetic diversity refers to the variation in genetic make-up among individuals of the same species.

Biodiversity is linked to ecological processes, such as fire, flood, avalanches, predation, pollination, seed dispersal, and grazing. These natural processes, and the physical environment that produces and supports the diversity of life, must also be maintained.

3.6.1 Strategic Goal

Biological diversity is maintained at a variety of scales - genetic, species, community and landscape.

3.6.2 Objectives

To maintain biological diversity at broad landscape and community scales, including ecological processes.

To maintain and restore viable populations of native species, including the genetic diversity within species.

To protect, maintain or restore rare, vulnerable, threatened or endangered genetic resources, species and biotic communities.

To ensure that natural disturbances (e.g. wind, flood, avalanches, grazing) and their effects function unhindered.

3.6.3 Key Actions

1. Monitor the status of vulnerable, rare, threatened and endangered species in the park.
2. With other groups and government agencies, to develop recovery and management programs for vulnerable, rare, threatened and endangered species.
3. Prepare status reports on species for consideration under proposed species at risk legislation.
4. Ensure that monitoring, research and management programs address all aspects of biological diversity including aquatic resources, carnivores, ungulates, small mammals, birds, reptiles, amphibians, and invertebrates.
5. Maintain the ecological structure and function of the montane, subalpine, and alpine ecoregions, with particular emphasis on areas affected by development and use.

3.7 Air Quality

Nearby industrial activity, smoke from forest fires, idling trains, and heavy traffic on the TCH are the main threats to air quality. In addition to air quality concerns, inappropriate lighting is the subject of increasing attention as lights interfere with opportunities to view the night sky.

3.7.1 Strategic Goal

Air quality is of the highest possible standard.

3.7.2 Objective

To work with others to ensure that human sources of pollution do not impair visibility, the ability of the ecosystem to support a full range of naturally occurring species, or human safety.

To implement an environmental management system (see section 9.0).

3.7.3 Key Actions

1. Monitor air quality.
2. Address issues related to temperature inversions.
3. With other agencies responsible for atmospheric sciences, monitor long-term changes in air quality and visibility, using national parks as benchmarks.
4. Reduce vehicle, locomotive and other fossil fuel emissions in the park.
5. Conduct prescribed fires under conditions that limit, where possible, the volume, intensity and duration of smoke in populated areas.
6. Through education and outreach, promote informed action to protect ecosystems from decline caused by global change.
7. Encourage the use of lighting that is functional and does not detract from the natural environment.

3.8 Geology and Landforms

Yoho National Park of Canada protects geological and physiographic features of national and international importance, for example the soft bodied fossils of the Burgess Shale in the Stephen Formation and the Ice River Igneous Complex.

Road and rail construction pose the greatest threat to landforms and physical processes in Yoho National Park of Canada. The park contains a number of disturbed sites—e.g., borrow pits from previous road construction. Future Trans-Canada Highway upgrades are of particular concern.

3.8.1 Strategic Goal

Geological processes, including erosion and deposition, shape the landscape and its ecosystems.

3.8.2. Objectives

To protect special geological and palaeontological features.

To protect and restore park landforms and associated physical processes from the impact of development and use.

To consider the impact of management decisions on landforms outside the park.

3.8.3 Key Actions

1. Provide special protection for the Burgess Shale fossil sites and the Ice River Igneous Complex and caves.
2. With other interested parties, assess the park's understanding of its geological resources; determine research priorities.
3. Prepare a long-term plan for gravel extraction:
   - keep the need for aggregate and abrasives to a minimum;
   - avoid disturbing natural features and rare or sensitive landforms;
   - rehabilitate disturbed sites; and
   - whenever possible, obtain construction material from suitable sources outside the park.
4. Rehabilitate disturbed sites.

3.9 Aquatic Ecosystems

Past management practices have led to a noticeable decline in the ecological integrity of aquatic ecosystems. Many factors have contributed to this situation including the introduction of non-native fish species, the release of nutrients and other chemicals into the water, pollution from highways and the railway construction, and flood control measures. In addition, downstream damming and resource extraction activities may have affected aquatic systems in the park.

3.9.1 Strategic Goal

The natural structure and function of aquatic ecosystems are maintained.

3.9.2. Objectives

To maintain water quality, water levels and flow regimes within the natural range of variability.

To manage human use so that visitors can enjoy and learn about the park in a way that protects the integrity of aquatic ecosystems.

3.9.3 Key Actions

Inventory and monitoring

1. Inventory aquatic resources.
2. Collect baseline data.
3. Monitor native and non-native fish species, invertebrates, algae, amphibians, and waterfowl.

Restoration of Aquatic Ecosystems

4. Identify aquatic habitats for restoration.
5. Identify waterbodies that can be used as benchmarks—prohibit angling in these waterbodies, protect or restore habitat, and promote long-term research.
6. Ensure any necessary modification of stream channels avoids siltation, loss of habitat, and changes to natural flow.
7. Minimize the effects of transportation corridors and other structures (culverts, stream channelization, bridge abutments) on seasonal changes in water flow and water levels.
8. Work with surrounding land managers to address regional aquatic issues.
9. Restore native fish species and invertebrate populations, on an experimental basis.
10. Minimize or reduce the effects of backcountry sanitation facilities on water quality.

Angling

Recreational fishing will continue. Management will focus on ensuring viable native fish populations. This will involve a more comprehensive approach to aquatic ecosystem management.

11. Implement regulations to protect native fish.
12. Restructure open seasons for angling to protect native fish during spawning.
13. Where both native and non-native species occur in the same waterbody, consider catch and release regulations to protect native species.

Communication

14. Offer park visitors opportunities to learn about aquatic ecosystems.
15. Ensure visitors understand how they can reduce their impact on the park's aquatic resources.

3.10 Vegetation

Yoho's vegetation has evolved over thousands of years under the influence of lightning and climatic, geological, and human factors. Vegetation, while important on its own, also provides food, shelter and cover for wildlife.

As with all components of the ecosystem, vegetation is dynamic. The park's vegetation responds to short term natural disturbances such as fire, floods, grazing, avalanches, windstorms, insect infestations and disease. Aboriginal people influenced the park's vegetation in some areas through their use of fire; current vegetation management recognizes this practice.

In Yoho National Park of Canada, interference with natural processes has resulted in the following:

- a steady decline in the area occupied by critical ecosystem components such as open forest, montane meadows, and young forest stands;
- the loss of biodiversity;
- differences between the age and type of vegetation in the park and on adjacent land;
- increased risk of uncontrollable wildfire as a result of fuel build-up;
- invasions by non-native species such as leafy spurge and pine blister rust; and
- introduction of non-native weed species in many backcountry locations by horses and their feed.

Yoho National Park of Canada has a draft fire management plan that calls for the suppression of all fires caused by people or lightning in specific areas. The plan also outlines a program of prescribed burns.

3.10.1 Strategic Goal

Natural processes maintain the long-term composition and structure of vegetation communities.

3.10.2 Objectives

To maintain and restore the role of fire and other ecological processes, except where limited by safety considerations and the protection of park facilities and neighbouring land.

To control or eliminate non-native species that threaten the integrity of native plant species and communities.

3.10.3 Key Actions

Inventory

1. Assess native biodiversity.
2. Determine the current status of rare plant species.

Fire Management

3. Consider the objectives of adjacent land managers when planning prescribed fires.
4. With adjacent land managers and the province of B.C., develop a strategy to reduce the probability of wildfires spreading beyond the park boundary.
5. Determine, through scientific research and traditional knowledge, the effect of First Nations' traditional activities on vegetation and biodiversity.
6. Restore, through prescribed fires and fires caused by lightning, 50% of the estimated long term fire cycle (e.g., approximately 1.75 square kilometres annually).
7. Promote a greater understanding of the ecological role of fire.

Non-Native Species

8. Maintain an inventory of non-native plant species.
9. Control or eliminate non-native species that threaten the integrity of native plants and communities.
10. Encourage the use of native species for landscaping both park and private facilities.
11. Increase public support, awareness, and involvement in the control of non-native plants.

Ecosystem Function

12. Provide adequate habitat for native species by maintaining the natural structure and composition of vegetation.
13. Monitor forest insect species and disease.

3.11 Wildlife

There are nearly 300 species of birds, mammals, reptiles and amphibians in Yoho National Park of Canada. Many invertebrates are also found, although very little has been done to determine their status. Ungulates, including mule deer, white-tailed deer, elk, and bighorn sheep, are limited by lack of secure montane habitat. Although much of the park consists of rock and ice, large patches of high quality habitat at lower elevations support carnivores, ungulates, and other species. Human caused mortality, disturbance, and habitat fragmentation in the ecosystem influence how successfully large carnivores can use this habitat.

Yoho has a large variety of rare species. Preliminary research indicates that Yoho contains seven species designated "at risk" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Many animals are on the British Columbia provincial tracking lists for species at risk. Monitoring of selected species is crucial to determine their status and trends, and to focus management efforts in priority areas.

More human use, coupled with changes in the regional ecosystem, have resulted in:

- the displacement of wary species (e.g. grizzly bears);
- wildlife mortality as a result of highway and railway accidents or because animals have become habituated;
- habitat loss caused by resource extraction, development, and altered vegetation patterns;
- loss or disruption of wildlife movement corridors; and
- disturbance of wildlife during critical periods (e.g., mating or nesting, raising young, or when on winter range).

3.11.1 Strategic Goal

Populations of native wildlife are viable within the regional ecosystem.

3.11.2 Objectives

To maintain viable populations of grizzly bear, wolf, wolverine and other rare or sensitive wildlife vulnerable to displacement by people.

To maintain and, where feasible, restore habitat quality and connectivity for wildlife in the park and on surrounding lands.

To restore long-term patterns of behaviour, distribution and abundance of ungulates.

To reduce human-caused mortality that threaten the viability of wildlife populations in the park and regional ecosystem.

3.11.3 Key Actions

Wildlife Monitoring

1. Monitor populations and habitats of selected indicators or sensitive wildlife species.
2. With provincial government agencies, monitor shared wildlife populations and determine population trends.
3. Monitor birds in habitats that have been altered, or are at risk of being altered, by human activities (e.g., grasslands, wetlands, aspen forests).
4. Study the effects of human activity and habitat fragmentation on small mammals, reptiles, and invertebrates.
5. Study the historical status and distribution of wildlife in regional ecosystems.
6. Identify conservation strategies for species identified in the proposed *Species At Risk Legislation*.

Habitat Security

7. Determine security area targets for grizzly bears within one year.
8. Investigate the habitat requirements of, and cumulative effects on, species most sensitive to disturbance in winter.
9. Determine habitat requirements for sensitive wildlife during mating/rutting/calving/nesting/denning periods; ensure that human activity does not conflict with these requirements.
10. Identify prime denning habitats for wolverines; ensure that human use in late winter does not affect these areas.
11. Encourage surrounding provincial jurisdictions to restore secure habitat for viable populations of wary carnivore species.

Wildlife Mortality

12. Work towards reducing the death rate of large mammals as a result of highway and railway accidents by at least 25% over the next five years. Key areas include:
    - Trans-Canada Highway west gate area (summer and fall);
    - Trans-Canada Highway Ottertail Flats area (summer and fall); and
    - Canadian Pacific Railway (winter: wolf; other seasons: elk, deer, black bear).
13. Continue interagency discussions to reduce mortality on other highways in the greater ecosystem.
14. Ensure that the number of grizzly bears killed as a result of human activity each year is less than 1% of the population in the park.
15. Update and implement the wildlife-human conflict management plan.

Habitat Connectivity

16. Restore essential movement corridors at major pinch points (e.g., Field, Kicking Horse campground, Chancellor Peak Campground, Hoodoo Creek Campground, Kicking Horse Pass, accommodations and other park facilities).
17. Participate in large-scale planning and research initiatives such as the Yellowstone-to-Yukon initiative.
18. Work with the provinces of British Columbia and Alberta to secure movement of wolves through the Columbia and Crowsnest Valleys.
19. Develop performance measures to evaluate success in protecting carnivores.

Maintain, Protect and Restore Wildlife Habitat

20. Identify and enhance protection of sensitive sites such as wetlands, winter range, endangered species habitats, and other special habitats.
21. With other jurisdictions, encourage the protection of rare ecosystems in the Columbia Valley.
22. Maintain conditions to support a wolf pack in the park.

3.12 The Kicking Horse Wildlife Corridor

One management plan priority is to maintain or re-establish key wildlife corridors. An area of particular concern with respect to wildlife movement is the Kicking Horse Corridor between Kicking Horse Pass and the west park boundary. The Trans-Canada Highway, the CPR, the village of Field, the Parks Canada horse ranch, Outlying Commercial Accommodations, and Parks Canada campgrounds are all located in this narrow corridor. These facilities limit the movement of large carnivores and other sensitive wildlife through Yoho National Park of Canada.

3.12.1 Strategic Goal

Wildlife move freely through the Kicking Horse Corridor.

3.12.2 Objectives

To implement the *Field Community Plan.*

To reduce the footprint of facilities along the lower slopes and valley floor.

To enhance wildlife movement.

To reduce mortality at high-kill areas along the CPR and Trans-Canada Highway.

To improve habitat connectivity at major "pinch-points".

3.12.3 Key Actions

See also Section 3.11.3—Wildlife Mortality & Habitat Connectivity; Section 6.0—Transportation

1. Close the 1A Highway.
2. Reduce the footprint of the Monarch Campsite and the Parks Canada horse ranch.
3. Prepare an integrated plan for the Kicking Horse Corridor that addresses human use, transportation, wildlife mortality, and the location and use of infrastructure.

3.13 Indicators of Ecological Integrity

To measure the effectiveness of the actions outlined in this chapter, Parks Canada will use a suite of indicators. Indicators represent components of the ecosystem that are either sensitive to change, or that reflect overall ecosystem health. Indicators must also represent different scales and time frames—from species to landscape and from the short to long term. By comparing the health of an indicator to a target or desired level, researchers can assess progress in achieving the park's goals for ecological integrity.

This approach is directly linked to the *State of the Parks Report*, which identifies three areas for assessing ecological integrity—biodiversity, ecosystem function, and stressors. The indicators chosen will allow Yoho National Park of Canada to assess its progress in these areas.

Indicators and targets, with the associated research and monitoring, will also help Yoho National Park of Canada fulfill its obligations to assess the cumulative effects of human use required by the *Canadian Environmental Assessment Act*.

Many of the actions in this chapter relate directly to establishing targets or comparing the status of indicators with their targets. In cases where information is not currently available to set a target, actions have been identified to fill the information gap. In other cases, actions relate directly to monitoring the indicator's current status with respect to its target. Within the next year, Yoho National Park of Canada will refine the indicators in Table 1 to assess ecological integrity. This list will be updated on a regular basis. Parks Canada's goal will be to sustain existing levels of ecological integrity and to work towards improvements.

TABLE 1. INDICATORS OF ECOLOGICAL INTEGRITY

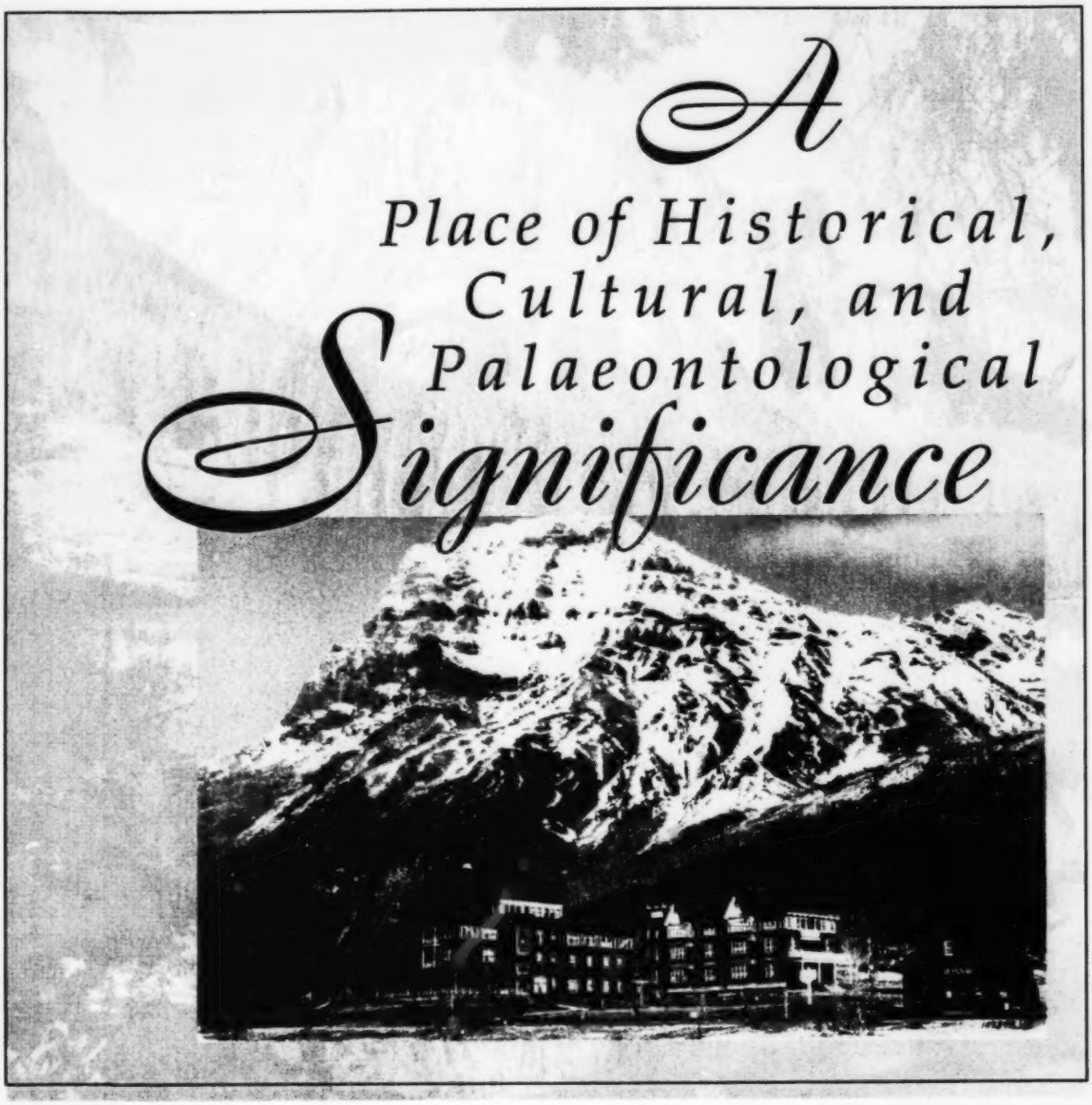
INDICATOR	TARGET	COMMENTS
	GEOLOGY & LANDFORMS	
Burgess Shale.	Development of a plan for protection of fossil locations within two years.	Interim plan completed.
Disturbed sites.	Rehabilitate one site per year.	Priorities are identified in the disturbed sites inventory.
	AQUATIC ECOSYSTEMS	
Native fish species.	a) maintenance of native fish in park waters. b) reintroduction of priority native species. c) self-sustaining reintroduced stocks.	Baseline work has been initiated.
Degree of naturally occurring connectivity between water bodies and wetlands.	Connectivity restored where appropriate.	Baseline work has been initiated.
Percent distribution of non-native fish stocks that compete with native stocks.	Reduction in the distribution of non-native species where they compete with native species.	Locations and targets to be identified.
Healthy regional aquatic ecosystems.	Development of multi-agency plan for protection of upper Kootenay and Beaverfoot Rivers (within 5 years).	No work to date.
Water quality.	Leadership targets for Field treatment plant: • faecal coliform - <20/100ml (end of pipe) <2/100ml (end of mixing zone) • phosphorus - <0.005 mg/l • pH - = background levels • BOD_5 - <10.0 mg/l • total suspended solids <10.0 mg/l NH_3N summer <1 mg/l winter <5 mg/l	Meeting leadership targets in the Field Treatment Plant will require a long term phased approach of infrastructure upgrades and improvements to operating procedures. In the short term, Parks Canada will ensure that upgrades exceed the most stringent federal and provincial standards.
	VEGETATION	
Long term average fire cycle.	50% of estimated long term fire cycle or approximately 1.75 km^2 annually through prescribed burns and natural fires.	Vegetation management plan drafted. Prescribed fire program underway.
Area occupied by open forest, montane meadows and young forest stands.	Acceptable targets for the amount and distribution of these vegetation communities will be defined within 3 years.	The extent of all stands is declining due to the lack of wildfire.

TABLE 1. INDICATORS OF ECOLOGICAL INTEGRITY

INDICATOR	TARGET	COMMENTS
	VEGETATION	
Extent of non-native plant populations.	Develop site specific targets within one year.	Non-native species are increasing. Integrated pest management is in place.
Area of grassland in the montane ecoregion.	Reversal in the decline of grassland.	Further work required to quantify desired increase in grassland area.
Regional forest management.	In cooperation with BC Ministry of Forests & Environment, develop indicators for: • changes to the proportion and distribution of habitat types • changes to the rate of successional change • fuel reduction, fire guards, and landscape restoration along shared boundaries	Interagency discussions have begun.
	WILDLIFE	
Vulnerable, sensitive, threatened and endangered species.	Strive to maintain the presence of nationally and provincially listed species.	Multi-agency research on grizzly bears is underway.
Grizzly bear habitat effectiveness.	Maintain and improve habitat effectiveness targes. See Table 2 in section 5.7.	The habitat effectiveness model is a useful guide in human use management, but is not the only tool used to make decisions.
Grizzly bear habitat security.	Identify internal habitat security targets within one year. Work with managers of adjacent land to identify and manage regionally significant security areas.	Interagency discussions currently occurring through the Rocky Mountain Grizzly Bear Planning Committee. Existing situation in the park has been determined.
Grizzly bear linkage zones.	Strive for effective internal and regional linkage zones.	Same as above.
Habitat connectivity for large carnivores.	Implement strategies for the park within five years. Work with surrounding land managers to manage regional wildlife corridors.	Most critical corridors have been identified.
Kicking Horse Corridor.	Improve wildlife movement in the corridor.	Actions identified in Field Community Plan. Specific actions will be identified in the Kicking Horse Strategy.
Large mammal highway and railway mortality.	Work towards a 25% reduction in mortality along transportation corridors.	Some mitigation has begun. High kill areas and seasonal problems are well understood.

TABLE 1. INDICATORS OF ECOLOGICAL INTEGRITY

INDICATOR	TARGET	COMMENTS
	WILDLIFE	
Annual grizzly bear mortality.	<1% annual human-caused mortality within the park.	Grizzly mortality is currently less than 1%.
Songbird diversity.	Presence of all native species.	Some monitoring in place.
Elk and mountain goat population demographics (recruitment rates, density, and cow-calf ratio).	Establish population trend for the two species within 5 years.	Initial baseline monitoring underway.
Habitat effectiveness targets (wolf) and habitat suitability models (lynx).	Establish suitability model for lynx within five years. Establish habitat effectiveness target for wolf and lynx within 5 years.	Background research and analysis is ongoing.
Wildlife/human conflicts.	Reduce the number of human/wildlife conflicts.	Baseline work underway.
	COMMUNICATIONS	
Understanding of ecological integrity issues.	Improved understanding of ecological integrity issues by regional residents.	Use baseline data from 1993 Angus Reid survey.
	AIR QUALITY	
Incidence of poor air quality in Field.	Fewer incidents.	Need baseline information, ongoing monitoring program and a strategy to minimize periodic poor air quality problems.
	REGIONAL ECOSYSTEMS	
Landscape unit planning.	Support cooperative regional planning for areas adjacent to the park. Develop and participate in a land managers forum for the East Kootenays that focuses on shared ecosystem priorities.	Work with the Provincial Interagency Management Committee is underway.



4.0 A PLACE OF HISTORICAL, CULTURAL AND PALAEONTOLOGICAL SIGNIFICANCE

4.1 Overview

By linking past and present, our cultural heritage helps us appreciate the human experience and understand who we are as Canadians. Yoho's cultural resources include 114 known archaeological sites, two national historic sites, five federal heritage buildings, a heritage railway station, many historic objects and records, and cultural landscapes and features. Yoho contains other buildings of local and regional significance and one Historic Sites and Monuments Board commemorative plaque for E. G. Deville—a person of national historic significance.

In 1986, a 67-km stretch of the Kicking Horse River was declared a Canadian Heritage River. It was chosen for its representation of river environments on the west slope of Canada's Continental Divide, its association with Canada's transportation history, its recreational opportunities, and its exceptionally scenic environment.

The Burgess Shale is one of the most significant fossil finds in the world and is uniquely important for understanding evolutionary biology and Cambrian life forms. Public and scientific interest in the Burgess Shale has increased steadily during the past decade.

Issues related to the Burgess Shale include the protection of fossils, management of research activities, access to existing collections, and guided hikes. After years of excavation, there is concern that ongoing activity may deplete the richest part of the fossil bearing strata and limit future research opportunities. Continual removal of the richest fossil-bearing strata may mean losing an important part of its scientific value.

Parks Canada's fossil collections are currently housed at the Royal Ontario Museum and the Geological Survey of Canada. Fossil collection in various institutions must be well cared for and accessible to researchers and the public.

The Yoho-Burgess Shale Foundation has an agreement with Parks Canada allowing it to offer guided hikes to the Burgess Shale. Reviewed every five years, this agreement outlines terms such as the number of hikes and the maximum group size.

Yoho's cultural resources are part of an irreplaceable heritage. They are important in themselves and also for their combined contribution to the significance of a site and a sense of place. There are two classification levels for cultural resources: Level I: which are directly related to reasons of national historic significance and Level II: which are not related to reasons of national historic significance, but have been determined to have heritage value because of local or regional significance based on historical, aesthetic or environmental qualities.

National Historic Sites & Commemorative Plaques in Yoho National Park of Canada

Twin Falls Chalet
Kicking Horse Pass
E.G. Deville (plaque)

Parks Canada defines a cultural resource as "a human work, or a place that gives evidence of human activity or has spiritual or cultural meaning, and that has been determined to be of historic value". It applies this definition to a wide range of resources, sites, structures, engineering works, artifacts and associated records. Parks Canada is committed to identify, protect and present the wide range of cultural resources in its care. This commitment is supported by the *National Parks Act* (1988), *Historic Sites and Monuments Act* (1953), *Heritage Railway Stations Protection Act* (1988), *National Archives Act* (1987), *National Parks Regulations, Parks Canada's Guiding Principles and Operational Policies* (1994) and the Federal Heritage buildings Review Office *Code of Practices* (1996). *The Parks Canada Cultural Resource Management Policy* (1994) governs the administration of cultural resources in national parks and establishes the following principles by which they will be managed: value, public benefit, understanding, respect and integrity.

Parks Canada cooperates with other agencies, organizations, businesses, and individuals to manage cultural resources in Yoho National Park of Canada. All of these parties play an important role in protecting and presenting the park's unique cultural environment.

Despite the completion of some baseline inventories over the last several years, many challenges remain. Better inventories and research will improve cultural resource protection. It will also allow Parks Canada to offer presentation programs that accurately reflect the park's history and that contribute to heritage tourism.

4.2 Strategic Goals

Commemorative integrity of national historic sites is ensured.

Cultural resources are protected and the associated themes presented.

Parks Canada and Aboriginal people collaborate on the protection and presentation of Aboriginal heritage in Yoho National Park of Canada.

The natural, historical and recreational values that led to the nomination of the Kicking Horse as a Canadian Heritage River are safeguarded.

The Burgess Shale World Heritage Site is protected and presented.

4.3 Objectives

To ensure the commemorative integrity of all national historic sites in Yoho National Park of Canada.

To highlight Aboriginal cultural heritage in collaboration with First Nations in ways that respect their traditions and values.

To protect important built heritage, archaeological resources, historic objects and documentary records in recognition of their value as irreplaceable cultural resources.

To increase the public's appreciation, understanding and respect for cultural heritage through involvement in the management, protection and presentation of cultural resources.

4.4 Key Actions

Cultural Resource Management

1. In consultation with First Nations and other interested parties, prepare a cultural resource plan for Yoho National Park of Canada.
2. Complete Commemorative Integrity Statements (CIS) for Twin Falls Chalet and Kicking Horse Pass national historic sites within one year.
3. Use CIS to guide the protection of cultural resources and the communication of messages of national significance and as performance indicators for the *State of the Parks Report*.
4. *Twin Falls Chalet*
   - complete the maintenance manual.
   - negotiate a new license of occupation that includes the requirements of the CIS.
   - erect HSMBC plaque.
5. *Kicking Horse Pass*
   - relate the site to other mountain passes and associated cultural resources.
   - enhance the presentation of the Pass as part of future highway upgrades.
6. *E.G. Deville*
   - improve the presentation at the HSMBC plaque site.
   - relate Deville to the cultural history of Yoho National Park of Canada.
7. Mark the location of national historic sites with highway signs and on park visitor maps.
8. Implement actions in the *Scope of Collections Statements* and the conservation site surveys.
9. Encourage agreements with other museums and educational institutions for the protection and presentation of cultural collections.

10. With the National Archives of Canada, implement a Parks Canada records management protocol.
11. Ensure the environmental assessment process considers cultural resources.
12. Foster partnerships to improve protection and presentation of cultural resources (e.g., Friends of Yoho, the CPR, the Field Community Council, First Nations, the Alpine Club of Canada, other community organizations, and private partners).
13. Develop a communications program that addresses cultural resource issues and targets key audiences.

Archaeological Resources

14. Update the *Archaeological Resource Description and Analysis;* present research results in a new, user friendly format.
15. Involve First Nations when dealing with aboriginal archaeological sites.

Built Heritage Resources

16. Pursue *Built Heritage Resource Description and Analysis* research to describe and assess architectural and engineering structures.
17. Submit all federal buildings that are at least 40 years old to the Federal Heritage Buildings Review Office (FHBRO) for evaluation.
18. Maintain structures recognized or classified by FHBRO.
19. Demonstrate leadership in the adaptive reuse of federal heritage buildings.
20. Complete *Built Heritage Conservation and Maintenance Plans* for all Classified and Recognized Federal Heritage Buildings in Yoho.
21. Ensure contracts with third parties reflect the conservation and maintenance plans.
22. Implement the *Field Community Plan*.

Canadian Heritage River

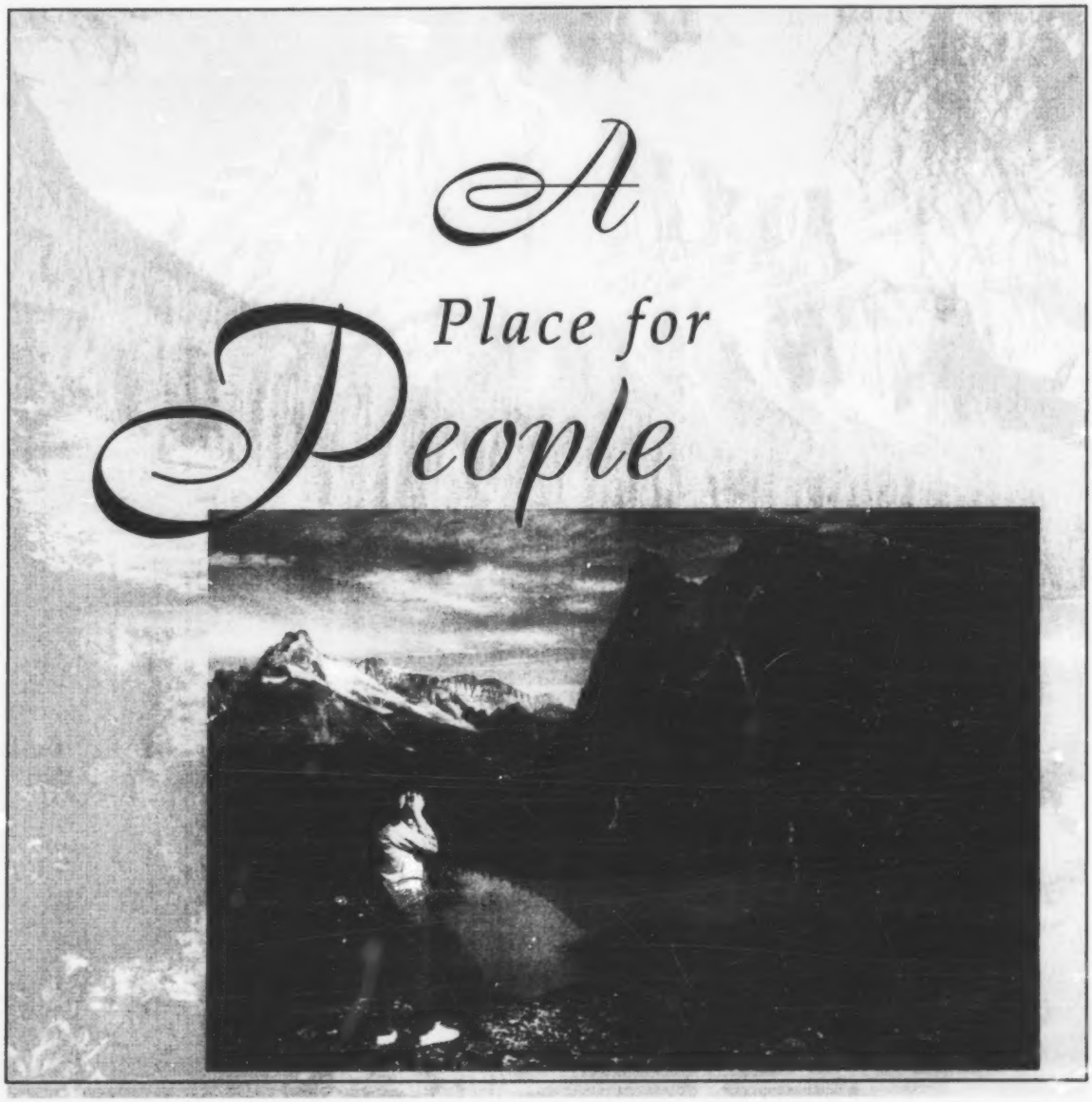
23. Enhance the profile of the Kicking Horse as a Canadian Heritage River through alliances, special historical events, and publications (e.g., a guidebook).
24. Maintain the historical, natural, and recreational values that led to the nomination of the Kicking Horse as a Canadian Heritage River.

Aboriginal Involvement

25. Raise the profile of Aboriginal heritage in consultation with First Nations.
26. Research traditional knowledge.
27. Advise First Nations about major environmental assessments that involve cultural resources.

Burgess Shale

28. Within two years, prepare a management strategy for all Burgess Shale Zone I areas.
29. Support palaeontological research that limits impact on the site, involves collaboration with other agencies and institutions, involves Canadian researchers, and respects ecological integrity.
30. Leave a section of the beds on Fossil Ridge unexcavated.
31. Update the inventory of fossil collections within Yoho National Park of Canada, at the Royal Ontario Museum and at the Geological Survey of Canada.
32. Work with the Smithsonian Institution in Washington, the Royal Ontario Museum, and the Geological Survey of Canada to:
    - allow as many researchers as possible access to fossil collections; and
    - develop a cooperative approach to Burgess Shale research and interpretation.
33. Take advantage of all opportunities to interpret fossil collections for the public.
34. Review research proposals with the Burgess Shale Research Advisory Committee.
35. Respect quotas set out in the agreement with the Yoho-Burgess Shale Foundation. Limit group size of guided hikes to 15 people.



5.0 A PLACE FOR PEOPLE

5.1 Overview

In much of the world, the mention of Canada evokes images of snow-capped peaks, conifer-clad slopes, glacial streams, and turquoise lakes. In Yoho National Park of Canada, the image is reality. Here visitors discover some of the best-known mountain scenery in the world. Of the more than seven million people who visit Canada's Rocky Mountain National Parks every year, about three million travel through Yoho. One-third stop to visit the park.

For some of these people, the park's value lies in the opportunity to experience, first hand, its exceptional wilderness. For others, recreational opportunities such as climbing, and cross country skiing are the key attraction. Whatever the reason, the challenge remains the same —to protect the park's ecological integrity while offering visitors an opportunity for a rewarding, enjoyable experience.

A key priority for Parks Canada is providing opportunities for public understanding, appreciation and enjoyment while maintaining ecological integrity. To achieve this, Yoho National Park of Canada will encourage appropriate activities, carefully plan and manage existing facilities, and provide for renewed emphasis on heritage presentation.

National parks are a cornerstone of Canada's tourism industry. To fulfill this role, and at the same time protect the resources on which tourism depends, requires the cooperation of a number of people and organizations. By working with the tourism sector, Yoho National Park of Canada will improve its ability to offer visitors a quality experience that reflects the long term goals of the people of Canada for their national parks and sites.

There is no question tourism raises a number of significant issues. How to manage growth, particularly day use? How to make sure that shoulder season use does not disrupt wildlife during the sensitive mating and birthing seasons? How to respond to changing needs and expectations? How to improve aging infrastructure such as roads, campgrounds, and interpretive signs?

To address these issues the park will prepare a heritage tourism strategy that focuses on high quality, authentic learning and travel experiences based on the park's key ecological and cultural values. Visitor services and facilities to support these experiences, including overnight accommodation, will continue to be appropriate for their national park setting. Education and awareness programs will engage people's curiosity and help them understand and appreciate the national park. A human use strategy will allow people to continue to enjoy the park, while protecting the area's ecological integrity.

5.2 Heritage Tourism

The World Tourism Organization defines heritage tourism as *"an immersion in the natural history, human heritage, arts, philosophy and institutions of a region or country"*. For the purposes of the national parks, this definition has been expanded to include environmental stewardship and human use management.

What does this mean for Yoho? Yoho National Park of Canada will be a place where people find a range of opportunities to enjoy, understand, appreciate and participate in the preservation of its natural, cultural and scenic features. Powerful and memorable experiences will contribute to Yoho's reputation as one of the world's most unique and environmentally sound tourism destinations.

What does this mean for the tourism sector? A tourism industry that respects the integrity of the natural environment and its importance to long-term economic viability will maintain a competitive advantage in a marketplace that increasingly demands quality and authenticity.

5.2.1 Yoho National Park of Canada's Heritage Tourism Strategy

The *Banff-Bow Valley Heritage Tourism Strategy* has set the future direction for tourism in Canada's Rocky Mountains. A complementary strategy for Yoho will address human use issues by, among other initiatives, promoting appropriate visitor experiences at the right places and the right times.

5.2.2 Yoho National Park of Canada's Market Position

As global markets change, more travelers are becoming interested in heritage tourism. Yoho National Park of Canada will focus its marketing efforts on heritage tourism and associated market segments and will use landscape management unit goals to determine its market position and approach to human use management.

Along with its partners, the park will promote opportunities for natural and cultural heritage education; wilderness appreciation and enjoyment; exploration and adventure. Marketing will be in harmony with environmental realities, including seasonal wildlife sensitivities and landscape management goals. A variety of messages that are appropriate for the markets and venues will foster appropriate expectations on the part of the tourism industry and individuals planning to visit the park.

5.2.3 Code of Ethics

Without appropriate environmental practices that protect the integrity of the natural environment, heritage tourism cannot survive. Yoho, through its heritage tourism strategy, will encourage the local tourism industry to adopt a code of ethics based on the code used by the Travel Industry Association of Canada. This will ensure everyone places the same high value on sustainable tourism practices and will encourage the tourism industry and its partners to commit to constant improvement in stewardship, including the management of waste, water and energy.

5.2.4 Strategic Goals

Canadians and their international guests enjoy high quality, authentic learning and travel experiences that are based on national park values and that bolster a sense of Canadian identity.

A well-informed tourism industry respects the ecological and social values of Yoho National Park of Canada.

5.2.5 Objectives

To make all visitors and residents aware they are in a national park.

To promote sustainable tourism by encouraging environmental stewardship.

To encourage opportunities, products and services that are appropriate and consistent with heritage and environmental protection.

To help employees share an understanding of the park's natural and cultural heritage with visitors by improving orientation, training and accreditation programs.

5.2.6 Key Actions

1. Involve businesses, First Nations and other groups in preparing a heritage tourism strategy; complete within one year.
2. Define the opportunities that Yoho offers in each season.
3. Ensure that shoulder season use does not adversely affect ecosystem health.
4. Collect data on private and commercial use of the park.
5. Monitor client satisfaction.
6. Raise the profile of national historic sites and underused facilities.
7. In partnership with the private sector, develop packages that are consistent with heritage values.
8. Strengthen private sector employee training and accreditation programs related to sharing heritage understanding with visitors.
9. Enlist the active participation of the tourism sector in achieving ecological integrity by developing a market position that reflects landscape management goals (see section 5.7).

5.3 Visitor Services and Facilities

Yoho will continue to offer a wide variety of experiences, services and facilities appropriate to a national park. Parks Canada will make every effort to manage its facilities in a way that provides fair access for a variety of visitors and reduces the potential for conflicting use. Visitors will enjoy sightseeing, skiing, hiking, horseback riding, watching wildlife, cycling, canoeing, rafting, fishing, educational programs, and other appropriate activities.

In a mountainous national park such as Yoho, public safety is an important concern. Public safety must be a shared responsibility. Visitors must take precautions that reflect the risk involved in their chosen activity. This involves knowledge of natural hazards, proper equipment and provisions, adequate skill and fitness, and the ability to cope with emergencies. Parks Canada will concentrate on information, facility design, and staff trained in public safety.

5.3.1 Strategic Goal

Appropriate facilities and services allow visitors with varying interests to understand, appreciate and enjoy the park.

5.3.2 Objectives

To provide safe, well-maintained, appropriate and accessible facilities consistent with park zoning, that have a minimal impact on the environment.

To provide services that are client oriented.

To work with others to provide high quality, appropriate services.

5.3.3 Key Actions

1. In the next five years, assess all visitor service and facilities to ensure they contribute to specific ecological and visitor experience and heritage presentation objectives for each landscape management unit.
2. Allow minor changes to facilities and services to address changing visitor needs, public safety, educational opportunities, and ecological issues.
3. Use the Appropriate Use Criteria (see Table 3, section 8) to evaluate new activities and increases to existing services.
4. Manage outdoor recreation in a way that promotes enjoyment, appreciation and understanding, minimizes environmental impacts, and reduces conflicts between user groups.
5. Ensure services and facilities respect disabled access guidelines.
6. Clearly define heritage tourism and stewardship responsibilities in all leases, licenses of occupation, and business licenses.
7. Develop a public safety plan and update the plan on a periodic basis.

5.4 Awareness and Education

Communication is an essential tool for sustaining Yoho as a protected area. Interpretation and outreach play a key role in connecting Canadians to our country's heritage and promoting stewardship of park resources. The more Canadians know about the parks, the more they will support and be involved in the management and protection of park resources. As visitors they will become more conscientious. As stakeholders and partners, they will become more involved in long-term protection.

Parks Canada is responsible for ensuring all visitors have the opportunity to learn about, understand and appreciate the area's nature and history. In addition, it is important for community residents and regional land management agencies to understand national park conservation issues, especially as they relate to ecological integrity. People who are unable to visit the park must also have opportunities to connect to its landscape, history and purpose through outreach programs.

Parks Canada cannot reach all of these audiences through its own programs. The Agency must work with others to reach as many of these audiences as possible. People learn about national parks in many different ways, through many different media. Visiting them is no longer the only way to experience their richness. The advent of new technologies, coupled with traditional means of communicating, has opened new horizons for reaching out to Canadians and international guests of all ages.

Yoho is in the process of updating the park's themes and messages. The park will work with other agencies, organizations, businesses and individuals to evaluate and enhance heritage presentation. Specific objectives will be developed for each landscape unit.

The Friends of Yoho play an important role in supporting park initiatives.

Messages of Significance

A system of protected areas: People will understand that Yoho is a national park in a Canada-wide "family" of national parks and historic sites administered by Parks Canada. They will know and appreciate that Yoho represents the Rocky Mountain Natural Region and is part of the Canadian Rocky Mountain Parks World Heritage Site designated by UNESCO and recognized internationally. They will understand the palaeontological significance of the Burgess Shale.

The commemorative intent of national historic sites: People will understand the historic significance of E.G. Deville, Twin Falls and Kicking Horse Pass national historic sites. They will learn about the significance of the Kicking Horse Heritage River. Canadians will appreciate that this is their heritage and will see cultural resources as windows on the past that help us better understand who we are as Canadians.

A sense of place: People will appreciate the special character and unique features of Yoho's Rocky Mountain environment: the processes that created and continue to shape the landscape and the influence of the landscape and its climate on flora and fauna, human history and present-day activities. Canadians will appreciate that this Rocky Mountains landscape and its wilderness characteristics are an enduring legacy that strengthens our identity as Canadians.

Ecological Integrity: People will understand the role of the park as a protected area within a larger regional ecosystem, the threats and challenges to maintaining the ecological integrity of the park, and what is being done to address these. They will understand that the environment they see today has been and will continue to be influenced by human presence. They will understand that Parks Canada is the lead steward in the protection of the park, but success can only be achieved through cooperation and shared stewardship with visitors, businesses, communities, residents and others both inside and outside the park.

5.4.1 Strategic Goals

Canadians and their international guests appreciate and understand the nature and history of Yoho National Park of Canada and the role the park plays in Canada's national parks system and the Canadian Rocky Mountain Parks World Heritage Site.

Information is available to help visitors make informed choices.

5.4.2 Objectives

To ensure education and awareness programs build on the idea of shared stewardship and involve third parties.

To provide information that helps visitors prepare for a safe trip, understand what a national park can offer and what types of use are appropriate.

To ensure all information is accurate and includes national messages.

5.4.3 Key Actions

1. Enhance the park's information, interpretive and educational programs by:
   - encouraging and supporting others in the development and delivery of interpretive information and programs;
   - improving non-personal media in areas where visitor use is high;
   - providing leadership in cultivating a "community of communicators";
   - pursuing appropriate opportunities for funding heritage programs and products; and
   - integrating orientation, interpretation, safety, and ecosystem information.

2. Create opportunities in the community of Field and the Columbia Valley to present messages that link the park to the regional ecosystem, the national system of protected areas, and the world heritage site.
3. Continue to promote the Field Visitor Centre as the main source of information about Yoho.
4. Provide support to others who are involved in delivering park programs and messages.
5. Improve visitor information and interpretation at Emerald Lake, Twin Falls Chalets National Historic Site, and Takakkaw Falls.
6. In cooperation with the Yoho-Burgess Shale Foundation, improve opportunities to learn about the Burgess Shale.
7. In cooperation with the educational community and cooperating associations, support a curriculum-based program for local schools in the Columbia Valley.
8. Use the park's web site to reach audiences that may not have the opportunity to visit the park.
9. Ensure pre-trip information creates realistic expectations and helps address ecological and public safety issues.

5.5 Frontcountry Visitor Accommodation Outside the Community

Accommodation in Yoho is varied—five frontcountry campgrounds, a hostel, and three outlying commercial accommodations (OCAs) at Wapta Lake, Cathedral Mountain and Emerald Lake. More campgrounds and hotels are being built adjacent to the park and in Golden.

5.5.1 Strategic Goal

Campgrounds and outlying commercial accommodation provides choices for overnight accommodation in a manner that maintains ecological and commemorative integrity.

5.5.2 Objectives

Redevelopment of outlying commercial accommodation will be consistent with the park's ecological integrity, visitor management, and historical and cultural resource management goals and objectives and will enhance the character of the built environment and result in appropriate visitor activities and services.

To maintain the current number of frontcountry campgrounds.

5.5.3 Key Actions

1. Site specific guidelines governing redevelopment of outlying commercial accommodation will follow decisions arising out of the outlying commercial accommodation report and will be considered part of this plan.
2. Prohibit the release of new land for commercial or other development in the park.
3. Review existing frontcountry campgrounds; make minor modifications if necessary to address specific ecological considerations, the needs of campers, and travel trends.

5.6 Effective Human Use Management

Human use management is the direction and guidance of people—their numbers, their behaviour, activities, and the infrastructure they require. While human use management may require some restrictions, it should not be seen as limiting peoples' freedom. It should be seen instead, as a means to protect the park for future generations, while allowing as many people as possible to enjoy the experiences and activities it has to offer.

Alternatives for managing access and use vary. Our challenge in developing an effective human use strategy is to determine which combination of approaches will address ecological/cultural integrity, education and visitor needs.

Most human use in Yoho is concentrated along park roads and around Field. Valley bottoms—where much of the use occurs—are critical areas for many wildlife species, providing food, protection and important travel corridors. Unrestricted human use in these areas and unchecked expansion of facilities to meet ever-increasing demand will result in serious habitat disturbances, increased potential for human-wildlife conflicts, and pressure on park ecosystems.

There are two sides to human use management—supply and demand. Supply is the park's capacity to sustain use (activity type, location, and timing) given its ecological and social objectives. Once this capacity is defined, the park can then influence demand accordingly. Defining capacity will require Parks Canada to collect and integrate ecological, social, and economic factors (See Landscape Management Units below).

More active management of human use will be required if Parks Canada is to offer visitors the opportunity to enjoy a quality experience and fulfill its mandate to protect ecological integrity and provide opportunities for understanding, appreciation and enjoyment.

Landscape Management Units

One of the key challenges for Parks Canada is to integrate ecological and social considerations in the management of human use. To achieve this, the park has been divided into Landscape Management Units (LMUs) that are approximately the size of the home range of an adult female grizzly bear. Each of the six landscape management units in Yoho has ecological integrity and visitor experience objectives as well as habitat effectiveness targets (see section 5.7).

Backcountry

With increasing development and use in the East Kootenays and the Central Rockies Ecosystem, the extent of true wilderness or backcountry is declining. It is important to maintain the integrity of the wilderness and the aspects of wilderness that people value.

Recent studies show that human use of backcountry areas has an impact on wildlife, particularly grizzly bears. There are trails in almost every valley bottom. This increases the challenge of the mountain national parks and surrounding areas to support a viable population of grizzly bears.

Getting away from facilities and roads, or travelling further into the wilderness are important opportunities that will continue to be available. Parks Canada will use the following parameters to manage its wilderness areas.

- controlled human use will not damage ecological integrity;
- visitors will experience a sense of freedom, solitude and challenge;
- vast expanses of protected landscapes will support viable populations of wildlife;
- a range of backcountry opportunities will require little or no infrastructure;
- the infrastructure that is provided will be consistent with zoning and the Backcountry Opportunity Spectrum;
- the majority of visitors will be self-reliant and will not depend on mechanized equipment, group tours, or commercial guides;
- small groups will predominate; and
- commercial and non-profit groups will help visitors in some areas learn the skills necessary to enjoy the backcountry.

The following apply to backcountry and wilderness lands or those lands classified as Zone II or Zone III.

- Parks Canada will provide opportunities for high quality, appropriate wilderness experiences. This will emphasize traditional means of travel, self-reliance, appropriate numbers of people, building understanding of the impacts of human use on ecological systems and encouraging appropriate visitor behaviour.
- A wide range of backcountry opportunities will continue to be provided including semi-primitive, primitive and wildland experiences. These categories of backcountry opportunities vary with respect to facilities, infrastructure, degree of management and ease of access. Ecological and human experience goals will determine where each type of experience will be provided. Semi-primitive areas provide the greatest support for visitors. At the opposite end of the spectrum are wildlands where there are no facilities and trails and if they exist at all, they receive little maintenance. This Backcountry Opportunity Spectrum (BOS) is based on the recognition that a combination of ecological, physical, sociological and administrative conditions gives value to an area and shapes a visitor's experience.
- Long-standing means of travelling through wilderness such as hiking, cross-country skiing, snow-shoeing and horseback riding will receive preference.
- Mountain bikes are appropriate under specific conditions. Concern about their use to gain faster access to the wilderness means this activity must be assessed using the landscape management unit's goals.

5.6.1 Strategic Goals

Visitors experience the park without impairing its ecological integrity and important cultural resources.

Ecological and social objectives are met by assessing and managing human use in each landscape management unit.

5.6.2 Objectives

To integrate ecological and visitor experience goals.

To provide opportunities for high quality, appropriate wilderness experiences.

To coordinate human use management strategies with Jasper, Kootenay and Banff National Parks of Canada and with other neighbouring jurisdictions.

5.6.3 Key Actions

1. Apply the following principles to human use management in Yoho.
   - Human use management will integrate ecological and social objectives at the landscape unit level.
   - Habitat effectiveness targets, based on landscape management units, will be used as one human use management tool. The overall objective will be to maintain secure habitat for large carnivores while providing a range of opportunities for visitors. Proposals for human use management will consider the number of disturbances rather than specific numbers of people.
   - The analysis of information and drafting of recommendations will be done at the most appropriate scale (local, landscape and regional).
   - Opportunities for understanding and appreciating heritage values will be considered in decision making.
   - Education will be the preferred method of solving conflicts between different types of users and in gaining support for human use management.
   - Use will be restricted or reallocated if its impact is unacceptable.
   - Wildlife travel corridors will remain effective.
   - Principles of precaution and adaptive management will apply when the effects on the ecosystem are uncertain.
   - Proposals to manage human use will be based on the best available information.
   - The park will use a variety of techniques for managing human use. These include quotas, relocating trails, moving visitors in groups, removing trail signs and trail head facilities, relocating campgrounds, improved communication, and reservation systems.
2. Phase in the implementation of human use management strategies over several years.
   - work with stakeholders, users and interested individuals to identify priorities for implementation.
   - develop a data base and technical systems to support human use management strategies.
   - consult the public concerning quotas, the distribution of quotas between users (e.g., horseback riders, hikers, bicyclists, private individuals, commercial operators, organizations, etc.), and the specific tools or techniques for managing use.
3. Use temporary closures or other restrictions on activities when necessary for public safety (e.g., avalanches, aggressive wildlife) or to protect sensitive natural or cultural resources.
   - inform the public about the reason for these actions as quickly as possible.
   - close facilities or areas permanently only after consultation with the public and as part of the management plan review process.

4. Consider allowing dog-sledding as long as there is a suitable location and no impact on water quality, wildlife, or other park visitors. Dogs may not be kennelled overnight in the park.
5. Prohibit the use of personal motorized watercraft.
6. Allow motorized vehicles on designated roads only.
7. Prohibit aerial sports, such as hang-gliding, para-sailing, para-gliding and base jumping.
8. Refuse to issue new fish guiding licenses or to increase the current level of guided fishing.
9. Prohibit the recreational use of over snow motorized vehicles including snowmobiles.
10. Review the management of shoulder season use as part of the landscape management unit planning process.

Backcountry

11. Allow the Alpine Club of Canada to maintain existing huts for climbers and hikers.
    - prohibit construction of new alpine huts or shelters.
    - prohibit expansion of the Elizabeth Parker and Stanley Mitchell huts.
    - consider allowing minor improvements to the remaining huts where there are demonstrated ecological gains.
12. Prohibit the use of helicopters to transport visitors and their supplies to the huts. Allow access by helicopter to service the huts.
13. Prohibit new commercial facilities and the expansion of existing commercial backcountry facilities.
14. Recognize that horses and mules are an appropriate means of experiencing the park in specific locations.
15. Use grazing quotas to manage multi-day horse parties. Apply seasonal restrictions to prevent trail damage.
16. Limit commercial horse use in the backcountry to levels permitted in 1999; allow some re-allocation where necessary to achieve LMU objectives.
17. On an individual basis, assess the impact of popular recreational activities, such as sport climbing, on the experiences of other visitors; determine ways to reduce their impact.
18. Prohibit expansion of the current trail system. Allow some trail rerouting and closures for specific reasons such as ecological integrity, visitor experience, duplication of access, lack of use, or maintenance costs.
19. Allow cross country ski track setting in Zone II areas where it currently occurs.

5.7 Landscape Management Units

Ecological and visitor experience objectives have been defined for the park's six landscape management units. Wildlife corridors, vegetation dynamics, wildlife mortality, wildlife disturbance and significant habitats/sites are some of the factors that were considered in establishing ecological objectives. Key factors in developing visitor experience goals included the appropriateness of the activity for the area, amount of infrastructure, and visitor expectations. Visitor experience objectives reflect Yoho's market position.

More detailed reviews of all activities, commercial and private, in the landscape units will be carried out in the next five years. If existing conditions meet visitor experience and ecological integrity goals, these conditions will be maintained. If goals are not met, then use will be modified.

5.7.1 Strategic Goals

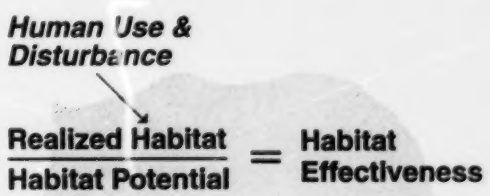
Integrated ecological and visitor experience objectives are achieved for each landscape management unit.

Visitors have opportunities to learn about the major themes of Yoho National Park of Canada.

PROFILE: GRIZZLY BEAR HABITAT EFFECTIVENESS
ONE TOOL FOR PARK MANAGEMENT

Habitat effectiveness models are one of the many tools Parks Canada relies on to examine the impact of human use on sensitive wildlife species. Using computers, biologists overlay roads, trails, campgrounds, towns, and facilities on a map of vegetation and other landscape features. The resulting model helps determine an area's ability to support species such as the grizzly bear.

Habitat effectiveness is a comparison between the *potential* of an area to support grizzly bears and the value of the area as bear habitat, after accounting for human disturbance (e.g., roads or buildings that remove or compromise habitat; high numbers of people causing bears to avoid an area).



To measure grizzly bear habitat effectiveness in Yoho, the park has been divided into six landscape management units (LMU). Each LMU is approximately the same size as the home range of a female grizzly bear and is classified according to its ability to serve as useful habitat.

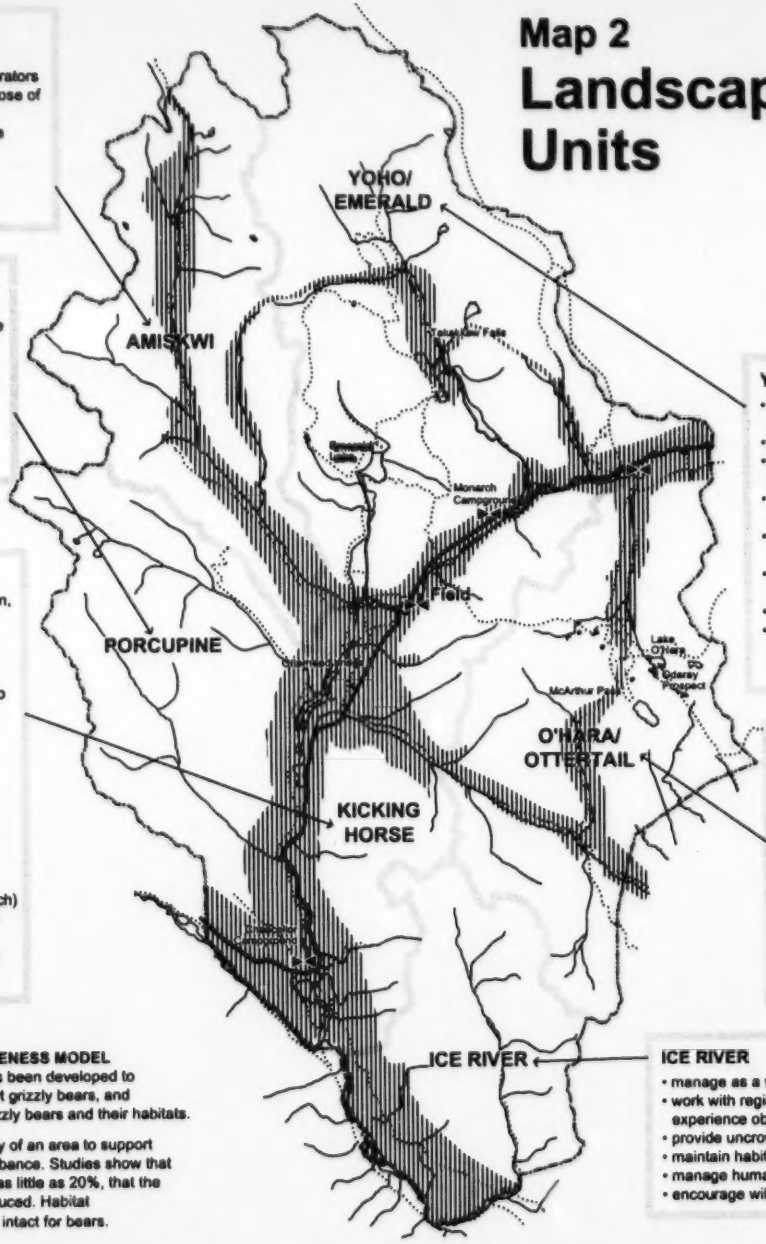
The habitat effectiveness model predicts that use of an area by grizzly bears as part of a permanent home range will be compromised if habitat effectiveness is reduced by more than 20%. Yoho's goal is to manage human activities in a way that ensures grizzly bear habitat effectiveness is at least 90% in three LMUs (see Table 2).

While habitat effectiveness is a useful tool in determining acceptable levels of human caused impact, it has limitations. In order to manage human use effectively, Parks Canada will use a range of tools to make effective decisions.

TABLE 2. Landscape Management Unit Habitat Effectiveness (HE) Targets

LANDSCAPE MANAGEMENT UNITS	PRISTINE HABITAT QUALITY	CURRENT HE (SUMMER %)	TARGET HE (SUMMER %)
Ice River	Moderate	90	>90
Ottertail	Moderate	79	>80
Yoho/Emerald	Low	70	>70
Porcupine	Moderate	88	>90
Kicking Horse	Moderate	73	>73
Amiskwi	Moderate	96	>95

Map 2
Landscape Management Units



LEGEND

- Grizzly Bear Linkage Zones
- Main Public Roads
- Trails
- Wildlife Movement Pinch Points
- Landscape Management Unit Boundaries

AMISKWI

- manage as a wilderness area
- work with regional land managers and tourism operators on visitor experience objectives that compliment those of the national park
- provide uncrowded trails with minimal infrastructure
- maintain habitat effectiveness above 95%
- maintain wildlife connectivity to adjoining areas
- manage human use at <100 events/ month
- allow mountain biking to Otto Creek

PORCUPINE

- manage as a wilderness area
- provide uncrowded trails with minimal infrastructure
- focus use on existing Otterhead trail
- maintain habitat effectiveness above 90%.
- discontinue maintenance on the Van Horne trail beyond Otterhead bridge
- encourage wildlife connectivity on adjacent provincial lands
- maintain Chancellor Peak campground

KICKING HORSE

- manage as a high use corridor where transportation, utilities,services and facilities are concentrated
- improve wildlife movement with priority on known constricted areas (pinch points)
- ensure that the highway and rail corridors support the national transportation system and contribute to healthy ecosystems
- manage for intensive human use within the boundaries of the transportation corridor, Field townsite and roadside attractions
- maintain habitat effectiveness above 73%
- upgrade selected facilities along the TCH
- maintain existing frontcountry facilities along the TCH
- improve the Kicking Horse wildlife corridor by reducing the footprint of certain facilities (e.g. Monarch Campground, Parks Canada's horse ranch)
- highlight the designation of the Kicking Horse as a Heritage River
- encourage appropriate opportunities for third party interpretation

YOHO and EMERALD

- manage as the park's major destination area known for its premier hiking & skiing opportunities
- maintain habitat effectiveness above 70%
- prepare human use strategy for backcountry opportunities and ski touring
- address infrastructure and aesthetic concerns at Emerald Lake (eg. impacts of parking lot and improved visitor flow)
- maintain wildlife connectivity through Kiwetinok Pass and Sherbrooke Creek
- investigate public transportation as a way to reduce traffic congestion at Emerald Lake and Takakkaw Falls
- manage access to the Burgess Shale to protect the site
- include the requirements of the commemorative integrity statement in the licence of occupation for Twin Falls Chalet National Historic Site.

O'HARA / OTTERTAIL

- manage O'Hara as a major attraction and premier hiking area based on current day and overnight visitor quotas
- close the 1A highway to enhance wildlife movement through the Kicking Horse Pass; relocate the Great Divide day-use area
- implement management actions that allow grizzlies and other species access to habitats in the Lake O'Hara area
  - reduce trail density in McArthur Pass by closing a portion of the Low Level Lake McArthur Trail
  - re-open McArthur trail to limited use
  - continue trail closures in the Odaray Prospect
  - maintain habitat effectiveness above 80%
- develop interpretive node for Kicking Horse Pass NHS

ICE RIVER

- manage as a wilderness area
- work with regional land managers and tourism operators on visitor experience objectives that compliment those of the national park
- provide uncrowded trails with minimal infrastructure
- maintain habitat effectiveness above 90%
- manage human use at <100 events / month
- encourage wildlife connectivity on adjacent provincial lands

Note: GRIZZLY BEAR HABITAT EFFECTIVENESS MODEL
A grizzly bear habitat effectiveness model has been developed to determine the landscape's potential to support grizzly bears, and quantify the effects of human activities on grizzly bears and their habitats.

A rating of 100% means that the natural ability of an area to support grizzly bears is not impacted by human disturbance. Studies show that when the habitat effectiveness is lowered by as little as 20%, that the areas' capacity to support grizzly bears is reduced. Habitat effectiveness greater than 90% is considered intact for bears.

5.8 KICKING HORSE

This unit, covering 173 km² of the montane or lower subalpine ecoregions, is the most visited area in the park. The Trans-Canada Highway, the CPR, Field, and a major frontcountry campground are located here. Special features include the Kicking Horse Heritage River, Leanchoil Marsh Environmentally Sensitive Site (ESS), Mount Stephen Trilobite Beds, and the Hoodoos. Field is the focal point for services and information. Deerlodge cabin near the Hoodoo Campground and the Superintendent's house in Field are important built heritage resources. Backcountry use is low. Much of the park's winter range for ungulates is located in this unit.

5.8.1 Objectives

Ecological

To manage this unit as a key wildlife corridor, wetland, and winter ungulate range.

To protect and present the cultural and natural features of the Kicking Horse Heritage River.

To reduce the impact associated with transportation corridors, utilities, services and facilities on ecological integrity.

Visitor Experience

To allow a high level of human use and its associated infrastructure in designated areas.

5.8.2 Key Actions

See section 3.12—Kicking Horse Wildlife Corridor

1. Examine ways to improve wildlife movement at constricted areas, called pinch points—Upper Kicking Horse Pass and the Hoodoo Campground.
2. Collect information required to improve wildlife movement across TCH and CPR.
3. Collect information required to restore water flows, riparian habitat and aquatic systems along the Kicking Horse River.
4. Maintain existing frontcountry facilities along the TCH (e.g. Wapta Lake picnic site, Spiral tunnels viewpoint, Ottertail Valley viewpoint, Finn Creek picnic site, Faeder Lake picnic site, Hoodoo day-use area).
5. Establish benchmarks for the protection and presentation of the Kicking Horse Canadian Heritage River.
6. Encourage appropriate opportunities for third party interpretation.
7. Implement the *Field Community Plan*; allow modest growth.

5.9 YOHO AND EMERALD

The Yoho/Emerald unit covers 331 km², mainly in the alpine and upper subalpine ecoregions. Apart from the Trans-Canada Highway corridor, this is the most popular area of the park. The Burgess Shale World Heritage Site, Twin Falls National Historic Site, the Wapta Icefields and 102 km of trails are key attractions. Popular frontcountry stops include Takakkaw Falls, Emerald Lake and the Natural Bridge. These areas offer short hikes, aquatic activities, scenic drives, food, accommodation, and a riding stable. Takakkaw Falls is the trail head for day and overnight activities in the Yoho Valley.

This unit contains the park's premier hiking, mountaineering and ski touring areas. Scenic trails and semi-primitive campsites offer exceptional opportunities to appreciate the park's major interpretive theme—rockwalls and waterfalls.

5.9.1 Objectives

Ecological

To maintain the Kicking Horse and Sherbrooke/Yoho/Amiskwi wildlife corridors.

To restore aquatic systems and protect native fish populations.

Visitor Experience

To allow a high level of human use.

To permit people to visit the Burgess Shale World Heritage Site by guided hikes.

To enhance educational programs.

To permit infrastructure such as signs, trails, and bridges.

5.9.2 Key Actions

1. Alleviate demand for parking at Emerald Lake and Takakkaw Falls during peak periods. Consider methods such as communications, public transit, and restrictions on private vehicles.
2. Protect and present Twin Falls Chalet National Historic Site.
3. Within three years, prepare a human use strategy to address backcountry opportunities and ski touring.
4. Maintain wildlife connectivity through Kiwetinok Pass and Sherbrooke Creek.
5. Manage access to the Burgess Shale under controlled conditions.
6. Designate fossil conservation zones on Mount Burgess that will be off limits to further excavation.
7. Minimize wildlife habituation and the potential for human/wildlife conflicts.
8. Minimize site specific ecological impacts (sewage treatment, water withdrawals, water contaminants and potability, Emerald Lake fish stocks).
9. Include the requirements of the commemorative integrity statement in the license of occupation for Twin Falls Chalet National Historic Site.

5.10 O'HARA/OTTERTAIL

Most of this unit's 230 km² is in the higher elevation alpine or upper subalpine ecoregions. The popular day-use trail system in the Lake O'Hara area includes most of the unit's 98 km of trails. Human use is high. A quota system and a restricted access road limit the number of hikers. The remainder of the unit contains low use, low maintenance trails, as well as some of the best potential grizzly bear habitat in the park. Attractions include Lake O'Hara, Kicking Horse Pass National Historic Site, fossil beds and the high peaks of the Continental Divide. Human use is concentrated around facilities such as Lake O'Hara Lodge, Abbot Hut and the Elizabeth Parker Hut.

5.10.1 Objectives

Ecological

To improve wildlife movement through the Kicking Horse Pass.

To allow grizzlies and other species continued access to habitats in the O'Hara/Ottertail Unit.

To use prescribed fires to manage vegetation and restore natural processes in selected areas of the Ottertail.

Visitor Experience

To continue to use current human use management strategies for Lake O'Hara including the shuttle bus service from the Trans-Canada Highway, quotas for day and overnight use, and trail restrictions and closures.

To provide access to trails in Kootenay's Rockwall area for multi-day hiking trips.

5.10.2 Key Actions

1. Close the 1A highway to enhance wildlife movement through the Kicking Horse pass.
2. Minimize bear-human conflicts.
3. Reroute a section of the Low Level Lake McArthur Trail.
4. Re-open McArthur Trail as a wilderness route that supports specific seasonal use.
5. Reduce the number of trails in the Odaray Prospect.
6. Include interpretation of the Kicking Horse Pass National Historic Site as part of upgrades to the TCH.
7. Allow some fires caused by lightning to burn according to pre-determined conditions.

5.11 AMISKWI

The Amiskwi comprises 201 km² of the subalpine ecoregion and a large area of montane. A small trail system (37 km) and the absence of designated campsites make this the only unit where a wilderness experience is available. Land use outside the park (commercial backcountry lodge, forestry roads) have the potential to impair the unit's wilderness value.

5.11.1 Objectives

Ecological

To recognize this area as important carnivore habitat and the major north - south wildlife corridor between the Kootenay - Beaverfoot and Amiskwi - Blackberry Valleys and Howse Pass.

To use prescribed fire to manage vegetation and restore natural processes.

Visitor Experience

To allow a limited number of visitors to take multi-day trips in a wildland setting.

5.11.2 Key Actions

1. Manage as a wildland area with uncrowded trails and minimal infrastructure.
2. Work with regional land managers and tourism operators on visitor experience objectives that complement those of the national park.
3. Maintain wildlife connectivity with adjoining areas.
4. Allow some fires caused by lightning to burn according to pre-determined conditions.
5. Limit human use to fewer than 100 events/month, including horseback riders and cyclists.
6. Allow mountain biking only as far as Otto Creek.
7. Use off-site communications to present heritage themes.

5.12 PORCUPINE

The Porcupine unit covers 218 km² along the northwest and west boundaries of the park. It contains a mix of wilderness valleys and sections of the Trans-Canada highway. The unit is about 40% montane (including the Ottertail River Flats ESS), 40% subalpine, and 20% alpine. Twenty-seven kilometres of trails, mainly in low use and remote areas, give hiking in this unit a wilderness feeling. Popular day-use attractions such as Faeder Lake and Finn Creek picnic sites and Mount Hunter Lookout draw visitors to this area.

5.12.1 Objective

Ecological

To recognize the area as important grizzly bear and wolf habitat.

To improve wildlife movement across the TCH and the CPR.

Visitor Experience

To provide minimal infrastructure and limited opportunities for day and overnight use.

To allow the unit to continue as an important mountain biking and cross country ski area for local residents.

To allow private recreational use on the Kicking Horse River.

5.12.2 Key Actions

1. Provide uncrowded trails with minimal infrastructure.
2. Focus use on the existing Otterhead Trail.
3. Discontinue maintenance of the Van Horne trail beyond Otterhead bridge.
4. Encourage wildlife connectivity with adjacent provincial lands.
5. Maintain the current capacity of Chancellor Peak campground.
6. Use off-site communications to present heritage themes.

5.13 ICE RIVER

This area's limited trail system (19 km) and lack of roads contribute to the park's interpretive theme—"Off the beaten Track". The unit covers 136 km², the majority of which is in montane and lower subalpine ecoregions. It includes the Ice River Igneous complex, the largest Zone 1 area in the park. There is no commercial development and no designated backcountry campsites. Human influence is evident along the park boundary, where commercial lodges, forestry roads, and their associated activities have shaped the landscape.

5.13.1 Objectives

Ecological

To recognize the area's importance as grizzly bear habitat and as the major north - south wildlife corridor between the Kootenay - Beaverfoot and Amiskwi - Blackberry Valleys and Howse Pass.

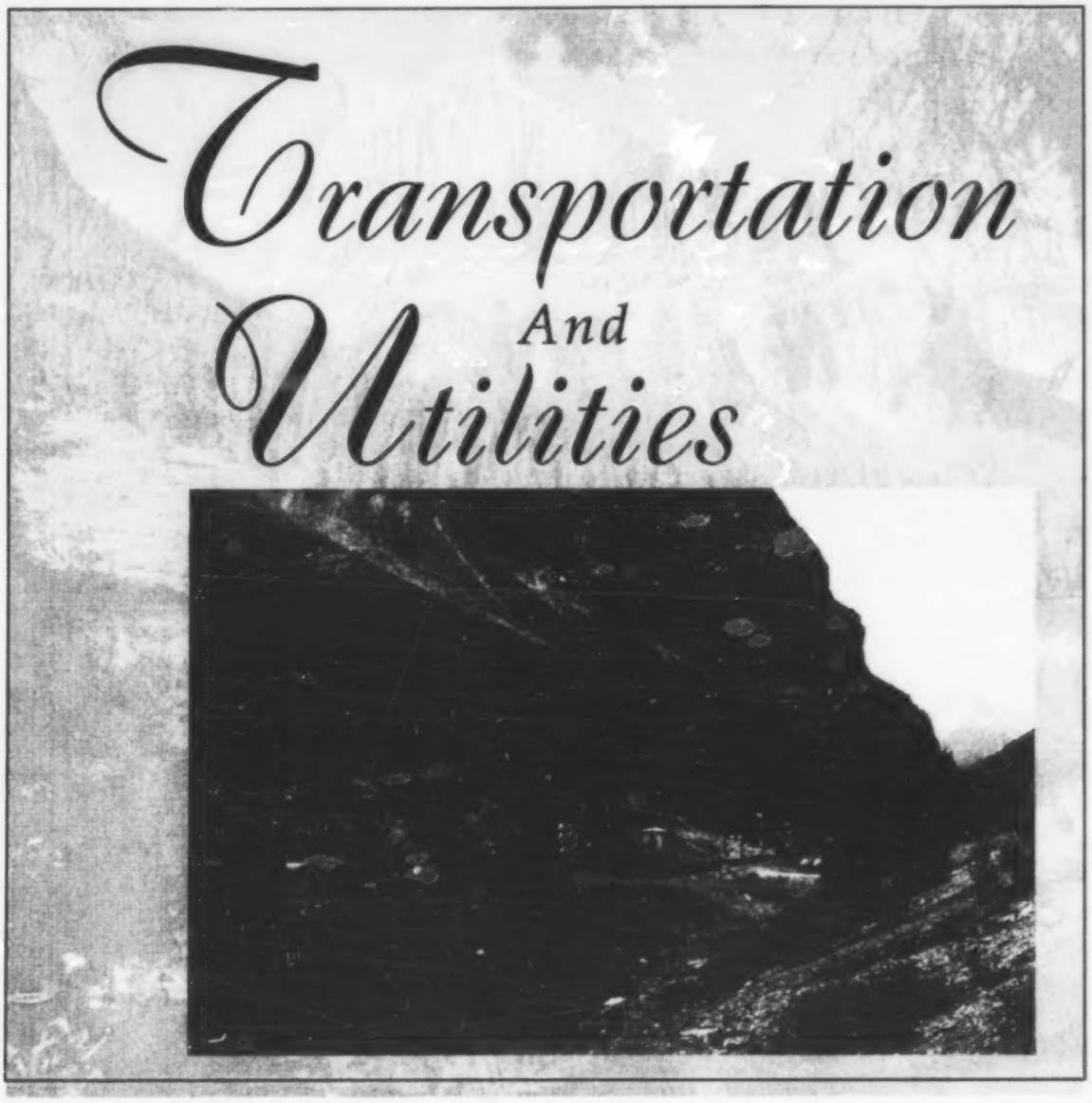
To use prescribed fires to manage vegetation and restore natural processes.

Visitor Experience

To allow a limited number of visitors the opportunity to experience a wilderness setting.

5.13.2 Key Actions

1. Manage as a wildland area.
2. Work with regional land managers and tourism operators on visitor experience objectives that complement those of the national park.
3. Provide uncrowded trails and minimal infrastructure.
4. Allow some fires caused by lightning to burn according to pre-determined conditions.
5. Limit human use to fewer than 100 events/month.
6. Use off-site communications to present heritage themes.
7. Encourage wildlife connectivity on adjacent provincial lands.
8. Protect the Ice River Igneous Complex.



6.0 TRANSPORTATION AND UTILITIES

6.1 Overview

In a national park, road and rail transportation is more than just moving people between destinations. A key part of managing human use, it provides travelers with the opportunity to sight-see and explore the mountain environment. In fact, almost all park visitors see and experience the park from roads or roadside facilities.

Two major national transportation corridors—the Trans-Canada Highway and the Canadian Pacific Railway mainline—pass through Yoho National Park of Canada. Every year millions of people travel along the Trans-Canada Highway. While some stop to visit, an estimated 74% pass through on their way to other destinations. The amount of

traffic on the Trans-Canada Highway through Yoho increases by about five per cent annually. This trend will create potential interest in upgrading this two-lane highway. In addition to highway traffic, up to 30 trains travel through Yoho every day. The CPR main line passes through some of the park's most critical habitat, including wetlands.

Environmental Impact

Considering the economic and social significance of the CPR and the TCH, and the lack of viable alternatives, these routes will remain in the park. While they are key to the nation-wide transportation of goods, and enable millions of people to appreciate the Rocky Mountain parks, they also have a significant impact on the environment. Parks Canada must look at ways to reduce their environmental impact, particularly on wildlife and aquatic ecosystems.

Wildlife

Transportation corridors in the park fragment wildlife habitat and restrict wildlife movement. Dozens of animals are killed by trains and vehicles every year. Wildlife, attracted by grain spills along the railway, come to depend on this food source and in the process lose their fear of people.

Aquatic Ecosystems

Salt and other contaminants in run-off disturb aquatic ecosystems.

The highways and the railway disrupt natural water flow, affect the health of riparian areas, and alter the natural evolution of the park's aquatic resources.

Highway 1A

Highway 1A is a secondary road between Lake Louise in Banff and Lake O'Hara in Yoho. A leisurely drive takes visitors to the Great Divide Picnic site. Highway 1A also fragments habitat and reduces wildlife movement through Kicking Horse Pass. The 1A between Lake Louise and the Great Divide is now closed to vehicles. The section of Highway 1A in Yoho is in poor condition and upgrading it to today's standards would be costly.

Scenic Flights

Air traffic, specifically scenic flights can affect both the environment and the visitor experience, especially in backcountry areas. Although air traffic over the park is currently low, the potential exists for an increase in the number of scenic flights during the period covered by the management plan. While developing regulations with Transport Canada may be an option, voluntary guidelines provide an opportunity to work more directly with the people affected by any change to this activity.

Utilities

In 1997, an overhead powerline was built from Golden to Field along the Trans-Canada Highway and Canadian Pacific Railway right-of-ways.

6.2 Strategic Goals

National transportation corridors and secondary roads are managed in a way that supports Parks Canada's commitment to ecological integrity and enables visitors to experience the park.

The impact of aircraft on ecological integrity and visitor experience is kept to a minimum.

Utilities have a minimal impact on ecological integrity and the visitor experience.

6.3 Objectives

To reduce the environmental impact of roads and the railway, including wildlife mortality.

To maintain a secondary road network that allows visitors to see and experience the park.

To identify areas where roads, the railway and related transportation development have caused loss of terrestrial, riparian and aquatic habitat; to restore these habitats where feasible.

6.4 Key Actions

Ground Transportation

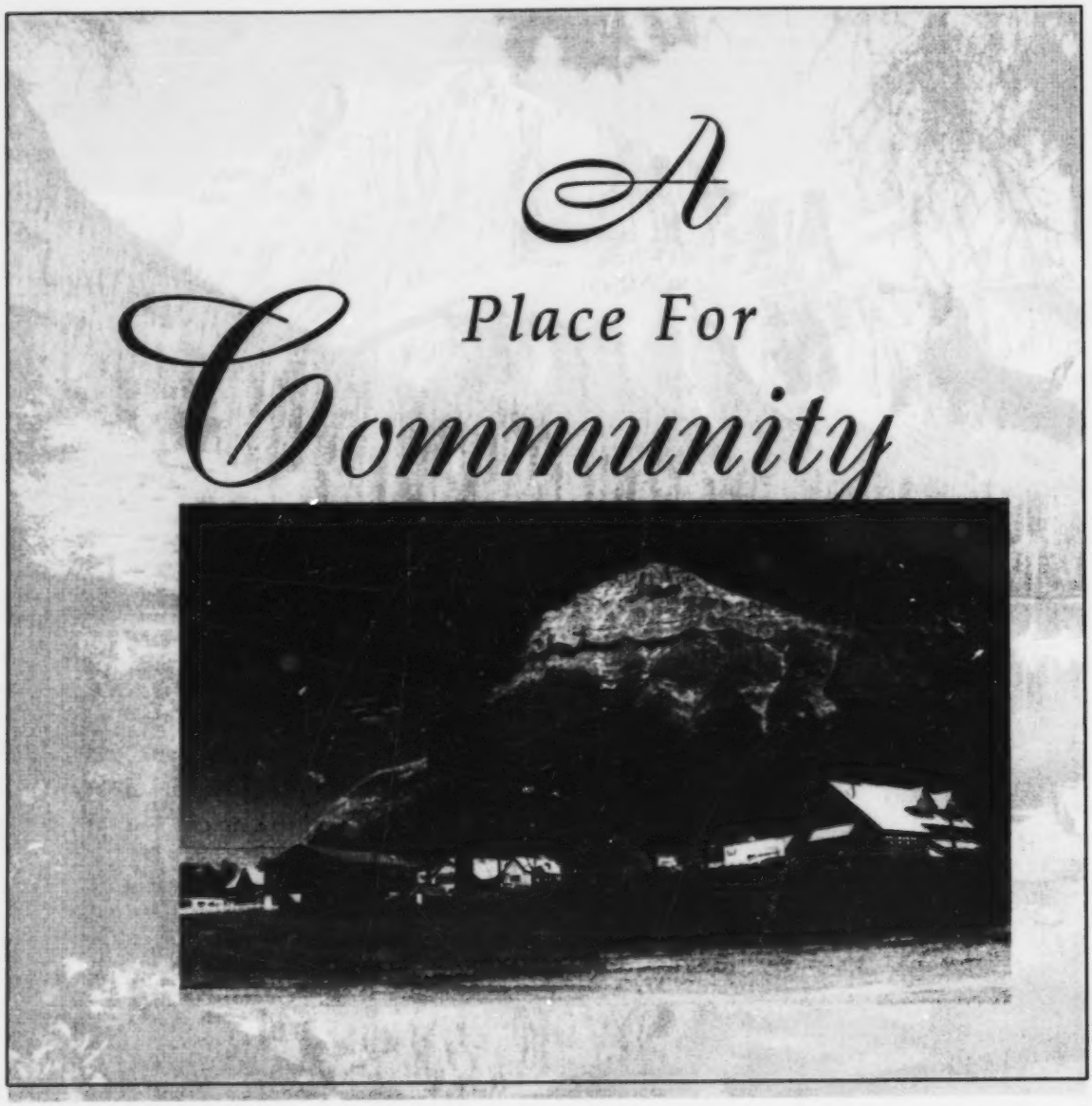
1. Participate with Kootenay and Banff in an examination of ground transportation to the year 2010. The study will consider the following:
   - transportation systems as a tool for managing human use;
   - ecological constraints to infrastructure development and vehicle use;
   - public transit;
   - improved access;
   - opportunities to learn about the park;
   - parking;
   - traffic flow; and
   - regional transportation needs and issues.
2. Continue to monitor traffic on primary and secondary roads, in parking lots, and at viewpoints.
3. Gather baseline data and additional information required to identify sensitive areas, critical wildlife habitat and wildlife movement areas to assist the development of mitigating measures associated with future upgrades to the Trans-Canada Highway.
4. Work with the CPR to reduce the impact of the railway on the park environment—e.g., wildlife mortality, hazardous spills, water flow, and vegetation that attracts wildlife.
5. Collaborate with the Transportation and Utilities Advisory Group in Banff National Park to address the environmental implications of highways, railways, and utilities in the park.
6. Close Highway 1A from the Lake O'Hara parking lot to the Continental Divide to motorized vehicles in order to reduce habitat fragmentation. Examine options for use of the 1A after it is closed to vehicles.
7. Keep the disruption of traffic, as a result of prescribed fires near the Trans-Canada Highway, to a minimum.
8. Allow cars to use the back road out of Field only in an emergency.
9. Improve interpretive signs and other media/facilities along park roads.
10. Continue to reduce the extent of non-native plants along the highway and railway corridor.
11. Identify sensitive areas, critical wildlife habitat, and wildlife corridors along transportation routes.
12. Establish long-term goals with transportation corridor managers for restoration and mitigation of past, present, and future effects on terrestrial and aquatic systems in Yoho.

Utilities

13. Restrict all new utilities to existing highway and rail corridors.
14. Ensure new utilities have minimal aesthetic and environmental impact.

Air Transportation

15. Work with local commercial operators on voluntary guidelines for scenic flights.
16. Work with land managers and provincial licensing authorities to manage the impact of commercial flights associated with activities adjacent to park boundaries (e.g., heli-hiking, heli-skiing).



7.0 A PLACE FOR COMMUNITY

7.1 Overview

Nestled at the foot of Mt. Stephen, Field owes its origin to the Canadian Pacific Railway. Originally a base for railway construction through the Kicking Horse Pass, the community has become a centre for visitor services, the location of Yoho's administrative office, and a place to live for people who work in the park and Lake Louise. Today, about 300 people live in Field. Given its setting and heritage resources, the community has an excellent opportunity to become a model national park community, demonstrating leadership in heritage tourism and environmental stewardship.

One of the biggest questions for national parks is how to clearly state the direction the park will take in managing development, growth and use in communities. In Field growth has been slow, with limited residential and commercial

development. However, because of growth in tourism and economic concerns, the village can expect demand for residential accommodation, services and facilities to increase. Other issues include:

- the impact of the community on ecological integrity, particularly the Kicking Horse Valley wildlife corridor;
- protection of built heritage;
- regional growth;
- a lack of certain basic services;
- potential upgrades to the TCH; and
- the desire to maintain the village's residential, low key character.

To address these issues, Parks Canada, with the involvement of the Field Community Council, and in consultation with the public, has recently completed the *Field Community Plan*. This plan, which was approved by the Minister of Canadian Heritage, will govern development and guide change in the community during the next 10 to 15 years.

The community plan is a tool that will help Parks Canada and Field make decisions that are consistent with the vision for the village and the park. Specific design parameters and limits to growth will ensure Field and the park remain healthy—environmentally, socially and economically. The plan also recognizes the importance of our cultural heritage and identifies measures to protect Field's character. Applying the principles outlined in the plan will ensure that Field continues as a living example of national park values. The plan is consistent with principles announced by the Minister of Canadian Heritage in June 1998. These principles were designed to ensure that commercial development supports basic and essential services and respects ecological integrity.

7.2 Strategic Goals

Maintain a healthy community - environmentally, socially and economically.

The community is managed in a way that ensures there is no net negative environmental impact on adjacent park land.

Appropriate basic and essential visitor and residential services reinforce national park values.

Growth is limited.

The community shows leadership in environmental stewardship and heritage conservation.

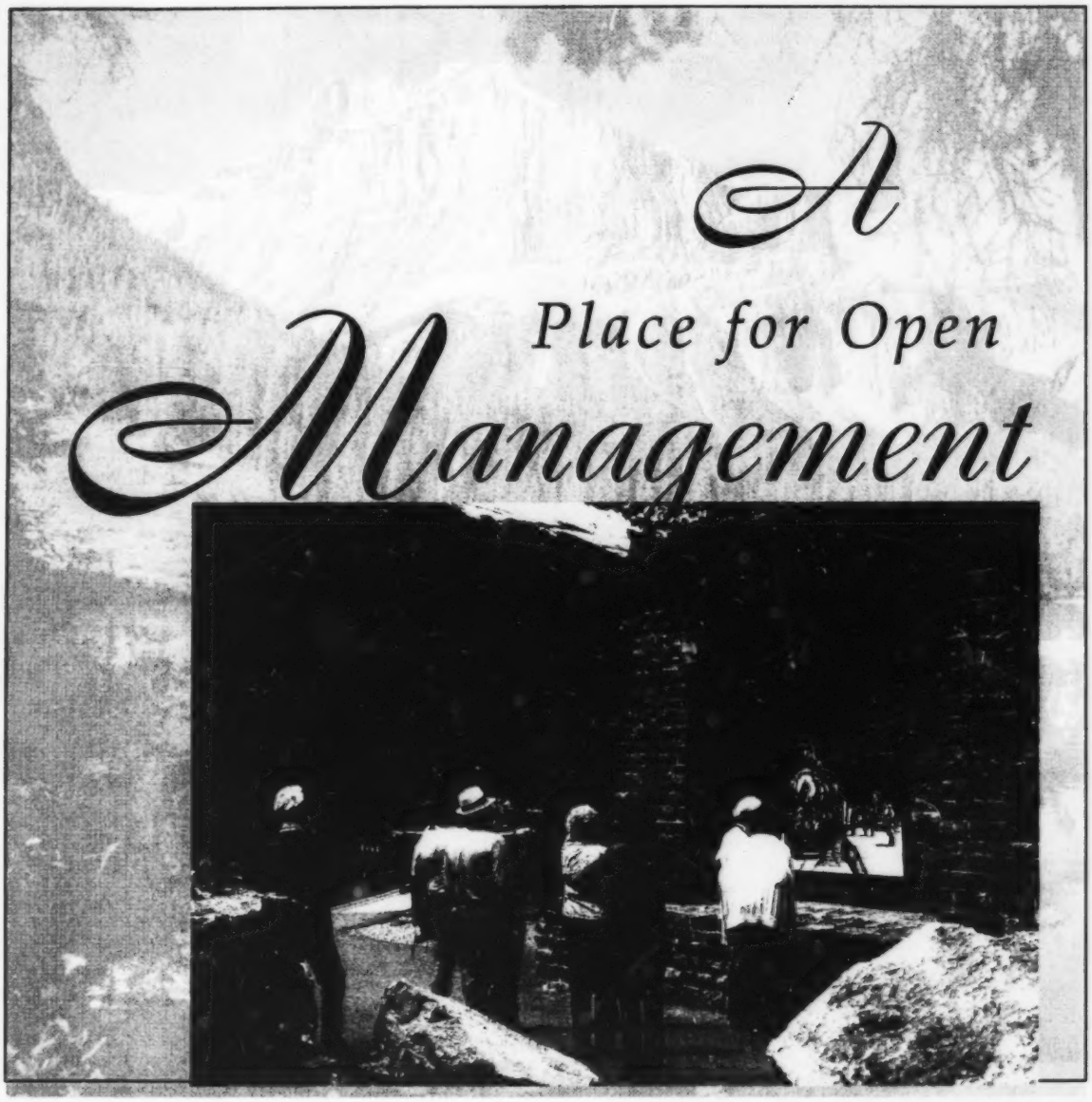
7.3 Vision

Field will strive to be a model of a safe, economically self-sustaining, family oriented community that respects the ecological and cultural importance of the national park and world heritage site setting. The village will maintain the style and scale that gives it its small mountain village character and charm. An eclectic mix of small scale homes and buildings will define the village's unique architecture.

A mix of small commercial operations and home-based businesses will meet the basic needs of visitors and residents and offer products and services that support the national park experience. The village will provide recreational, educational and essential community services that encourage people of all ages to visit or reside in Field. It will actively support the sharing of services with the neighbouring communities of Golden and Lake Louise. Field will, above all, be a community that reflects national park values and supports the well-being of residents and park visitors.

7.4 Key Action

1. Specific guidelines governing development and operation of the community will follow directions outlined in the approved community plan and will be considered part of this plan.



8.0 A PLACE FOR OPEN MANAGEMENT

8.1 Introduction

Yoho National Park of Canada belongs to the people of Canada. All citizens should feel confident they have an opportunity to participate in key decisions concerning their park. Areas that appear to be of the greatest concern for the public are ecological integrity and cumulative effects, access to park areas, limits to growth, appropriate use, and effective public involvement. This section highlights key strategic changes to ensure decisions are made in a consistent, fair, open, and responsive environment.

The following values and principles will guide governance and decision-making in Yoho National Park of Canada.

Values

- restraint and self-discipline today, for the sake of future generations.
- open, participatory decision making.
- equal opportunity for a sense of wilderness and a range of quality park experiences.
- predictable, consistent and fair regulation.
- competent, accountable management.
- respect for others.

Principles

All actions, initiatives and programs undertaken to realize the Vision are implemented in full accordance with the spirit and requirements of the *National Parks Act, Parks Canada's Guiding Principles and Operational Policies, the Field Community Plan* and the *Yoho National Park of Canada Management Plan.*

Standards are defined, enforced, and reviewed so as to ensure the maintenance of ecological and commemorative integrity.

Regulation and decision-making are responsive, open, participatory, consistent and equitable.

There is individual and shared responsibility to provide for protection and preservation of heritage resources.

Proactive, adaptive, and precautionary management take into account cumulative effects and limits to growth in recognition of the finite nature of the park.

Stewardship, based on sound science, is practiced through environmentally sensitive management, mitigation and restoration.

Integrity and common sense underlie all decision-making.

Planning and decision-making are coordinated on a regional basis.

Partnerships are encouraged subject to appropriate checks and balances.

There is a shared responsibility to achieve ecological, social, cultural and economic sustainability.

Public participation in decision-making will be guided by the following fundamental practices:

- access to clear, timely, relevant, objective and accurate information;
- adequate notice and time for public review;
- careful consideration of public input;
- feedback on the nature of comments received and on Parks Canada's response to participants; and
- respect for all interested parties and individual viewpoints.

8.2 Public Involvement

Parks Canada is committed to ongoing public involvement. The type of involvement will vary depending on the nature of the decision. Various groups and individuals will be asked for input on implementing this management plan's recommendations. Participation may consist of advisory groups, open houses, working groups, meetings with neighbouring jurisdictions, or commenting via the Internet. Parks Canada will also host an annual public forum to review and discuss the implementation of the management plan. The public will play an important role in designing the kind of forum that best meets their needs.

This plan sets out several public processes. These include the *Development Review Process*, and a process to review proposed changes in use or level of use, known as the *Appropriate Use Framework*. Yoho National Park of Canada is also committed to providing more opportunities for the public to participate in the research program.

8.2.1 Strategic Goal

Key policy, land-use and planning decisions are timely, fair and consistent, and are arrived at in an open and participatory manner.

8.2.2 Key Actions

1. Establish a process for an annual review of progress in implementing the management plan.
2. Report regularly to the public on the implementation of the management plan and how it relates to the *Parks Canada State-of-the-Parks Report*.
3. Involve the public in landscape unit planning (e.g., human use strategy for Yoho Valley).

8.3 Development Review Process

Buildings, roads, bridge, and other facilities are all essential to the enjoyment, operation, and management of a national park. The size, design, and use of these facilities must meet the needs of visitors and at the same time respect the park environment. They must also take into account the legislative and liability questions associated with development in a national park.

Main Components of the Development Review Process

The process has two stages—the development permit review and the building permit review.

1. An Advisory Development Board (ADB) facilitates public involvement. The board reviews all applications publicly to ensure they are appropriate and meet the requirements of the *National Parks Act*, regulations and planning. The ADB submits its recommendations to the park superintendent.
2. A District Review Board assesses procedural questions arising from ADB recommendations and decisions by the superintendent.
3. Sunset clauses limit the period during which an approval is valid.
4. High standards for environmental assessment incorporate the requirements of the *Canadian Environmental Assessment Act* (CEAA).

8.3.1 Strategic Goal

The Development Review Process ensures the consistent application of guidelines and public input to development, including major renovations, in Yoho National Park of Canada.

8.3.2 Objectives

To ensure development reflects the mandate as described in the *National Parks Act*, Parks Canada's policy, and the *Field Community Plan*.

To adhere to high standards for environmental assessment.

To improve consistency.

To involve the public.

8.3.3 Key Actions

1. Implement the Development Review Process.
2. Apply appropriate development and business licensing criteria to commercial activities that may not require development but could have an impact on the park.

8.4 Appropriate Use

Parks Canada is responsible for making decisions about what type of use is appropriate in a national park. In cases where the *National Parks Act*, *Parks Canada's Guiding Principles and Operational Policies*, or the *Park Management Plan* are not clear on appropriate use, Parks Canada must rely on other, clearly defined criteria in coming to a decision. Adjustments may be necessary at times and the review process must be flexible enough to accommodate changing public values and perspectives.

8.4.1 Strategic Goal

Appropriate use is evaluated using clear criteria that respect the mandate as described in the National Parks Act and Parks Canada's policy framework.

8.4.2 Objectives

To apply appropriate use criteria in assessing new activities and uses, and changes in levels of use associated with existing activities.

To encourage public involvement in the assessment of appropriate use.

8.4.3 Key Actions

1. Adopt the appropriate use criteria from *the Banff National Park Management Plan* (Table 3).
2. Set up a process to examine, annually, proposed new activities and use, and changes in levels of use.
   - invite the public to review proposed changes.
   - assess proposals against the criteria for appropriate use.
3. Where applicable, apply Field's Appropriate Use Framework to areas outside the community. (see Field Community Plan).

TABLE 3 - APPROPRIATE USE CRITERIA

The following criteria will be used to evaluate the merits of a new use, a change in an existing use, or a significant change in the level or intensity of use. The criteria are all relevant but are not meant to be exhaustive or absolute. They are intended to guide the evaluation process. In applying the criteria, the primary consideration is how the proposed change contributes to or detracts from the spirit and intent of the management plan, the *National Parks Act*, and Parks Canada's policy. The criteria are taken from the Banff-Bow Valley Study Round Table's *Summary Report*.

Impact on Environment

- Seeks to assess the extent to which the proposed change impacts the ecological integrity of the region. The assessment will include the effect of participation in the activity as well as the facilities and services required to support the activity.

Effects on Culture and Heritage

- Seeks to assess the qualitative dimension and preservation of a use that contributes to the region's heritage and cultural integrity. The assessment will reflect an understanding, appreciation of, and respect for the region's culture and heritage, and evolving cultural identity including aboriginal people.

Quality of Experience

- Investigates the extent to which the participant's and other's quality of experience is enhanced or diminished as a result of the proposed change. Its application recognizes that different visitors seek a broad range of different experiences, and that they value different resources, facilities and services in different ways.

Economic Effects

- Attempts to understand the economic effects of the proposed change. Issues that would be considered include: cost for visitors to the park, cost and revenues to Parks Canada, and effect on local, regional and national economies and market conditions.

Public Safety

- Used to determine the extent to which the proposed change imposes risks or dangers to participants or others.

Equity and Access

- Seeks to ensure that all citizens have a fair, reasonable, and equitable opportunity to participate in, and benefit from, the range of appropriate activities and experiences available in Yoho National Park of Canada. It will consider such factors as economic status, physical capabilities, and place of residence of the visitor.

Social Effects/Quality of Life

- Examines the social implications of the proposed change. Questions applied here would speak to: level of change to the region's existing social patterns and needs, effects on the social service structure, effects on social indicators (e.g., income distribution, housing costs, levels of crime, etc).

Education and Awareness

- Focuses on the extent to which the proposed change contributes to better understanding and appreciation of natural and cultural heritage, Yoho National Park of Canada, its role within the Canadian National Park System and in the larger ecosystem.

Level of Use: Frequency, Timing, and Quantity

- Would involve questions such as: How often does a proposed activity occur? When does it occur (e.g., season)? How many individuals are involved? What is the level of support required?

Physical Setting Related

- Has two components. The first focuses on whether the proposed change is well-suited to the physical setting of Yoho National Park of Canada. The second considers to what extent the proposed change is dependent upon a national park setting.

Heritage Tourism

- Focuses on the extent to which the proposed change contributes to the park's Heritage Tourism goals.

Environmental Stewardship

- Focuses on the extent to which the proposed change contributes to the park's Environmental Stewardship goals.

8.5 Regional Coordination

Parks Canada believes that, for the ecosystem to be sustainable, everyone concerned must be involved in finding solutions to issues and working towards common goals. Research, restoration, education, tourism and stewardship initiatives will all be more successful if we understand the role of the park within the larger region. This coordination will operate at many levels. Some initiatives will be local, while others will involve the entire ecosystem.

Yoho National Park of Canada has always worked with adjacent jurisdictions on questions of common concern. Most often, these cooperative activities only involve operational staff, not managers. They have also focussed on the land immediately surrounding the park, not on the entire ecosystem. In the past few years, several groups have begun to coordinate land use, planning and ecosystem initiatives on a broader scale.

1. The British Columbia Interagency Management Committee includes representatives from all provincial ministries. Parks Canada has been invited to participate in the committee. One of the key goals is to implement the *East Kootenay Boundary Land Use Plan* and to coordinate information exchange surrounding land use decisions.
2. The Central Rockies Ecosystem Interagency Liaison Group (CREILG) was established in 1991 to share information concerning the ecosystem. Membership includes Parks Canada, provincial government departments (British Columbia and Alberta), several universities, the Whyte Museum, the World Wildlife Fund, and private industry. In 1995, CREILG published an *Atlas of the Central Rockies Ecosystem* (White, 1995) that pulled together data bases and identified ecosystem issues. CREILG is currently involved in joint fire planning, a wolf study, the East and West Slopes Grizzly Bear Studies, and an access workshop.

Yoho National Park of Canada is also part of the traditional territory of the Ktunaxa and Shuswap Nations. First Nations concerns are an important consideration in land-use planning.

8.5.1 Strategic Goals

Ecological, social and economic systems in the park and greater ecosystems benefit from integrated management.

8.5.2 Objectives

To share expertise in heritage presentation and tourism with gateway communities and to increase understanding of park goals.

To continue to work with regional communities and agencies in areas of public safety and emergency services.

To coordinate regional development and use (e.g., tourism strategies, location and type of developments, and cumulative effects).

To contribute to an integrated network of protected areas.

To build lasting relationships.

To encourage cooperative backcountry management with adjacent lands.

8.5.3 Key Actions

1. Continue to participate actively on committees, established by other agencies, to discuss issues of common concern in the Central Rockies Ecosystem (e.g., ecological integrity, transportation, wildlife mortality).
2. Liaise with local communities to promote appreciation, and enjoyment of the region's natural and cultural heritage (e.g., Birds and Bears Festival, Anniversary Celebration of Swiss Guides).
3. Liaise with regional stakeholders to integrate ecosystem objectives (e.g.: "Living Landscapes", an initiative to improve the understanding of the human and natural history of the Columbia Basin).
4. Participate in environmental assessments or provincial/regional reviews of projects outside the park that are likely to have an adverse effect on the park's environment.
5. Support initiatives in the Central Rockies and East Kootenays that address environmental, social and economic issues and that contribute to achieving the park vision and mandate.
6. Participate in environmental, social and economic initiatives.

8.6 Research and Information Management

Many of the actions identified in this plan require the collection and analysis of information. Decision-makers, whether they be park managers, tourism operators, local residents or park visitors, need access to this information and, if information is not available, the ability to gather it efficiently. By helping us understand the relationship between "natural" and human processes, interdisciplinary research makes an important contribution to the park's ecological integrity objectives.

In an era of powerful new data management technologies, one of the biggest challenges for decision-makers is organizing and analyzing the diverse kinds of information available to them. Because ecosystem-based management strives to integrate our understanding of whole ecosystems—from continental through regional to park or even community-specific—scientists and information managers must make difficult choices about what to study and document. Studies must focus on significant issues and assess the area's environmental, economic and social well-being over time. A common approach is to select a component of the ecosystem, called an indicator, and track its health or changes in its status. Careful choice ensures a full range of indicators (e.g., water quality, carnivore populations, vegetation structure or rare and endangered species) reflect the overall ecosystem in a meaningful way.

8.6.1 Strategic Goal

Research and information, shared among agencies and individuals in the East Kootenay and Central Rockies Ecosystems, support sound decisions.

8.6.2 Objectives

To increase the public's understanding of the information on which decisions are based.

To implement an integrated research and monitoring program.

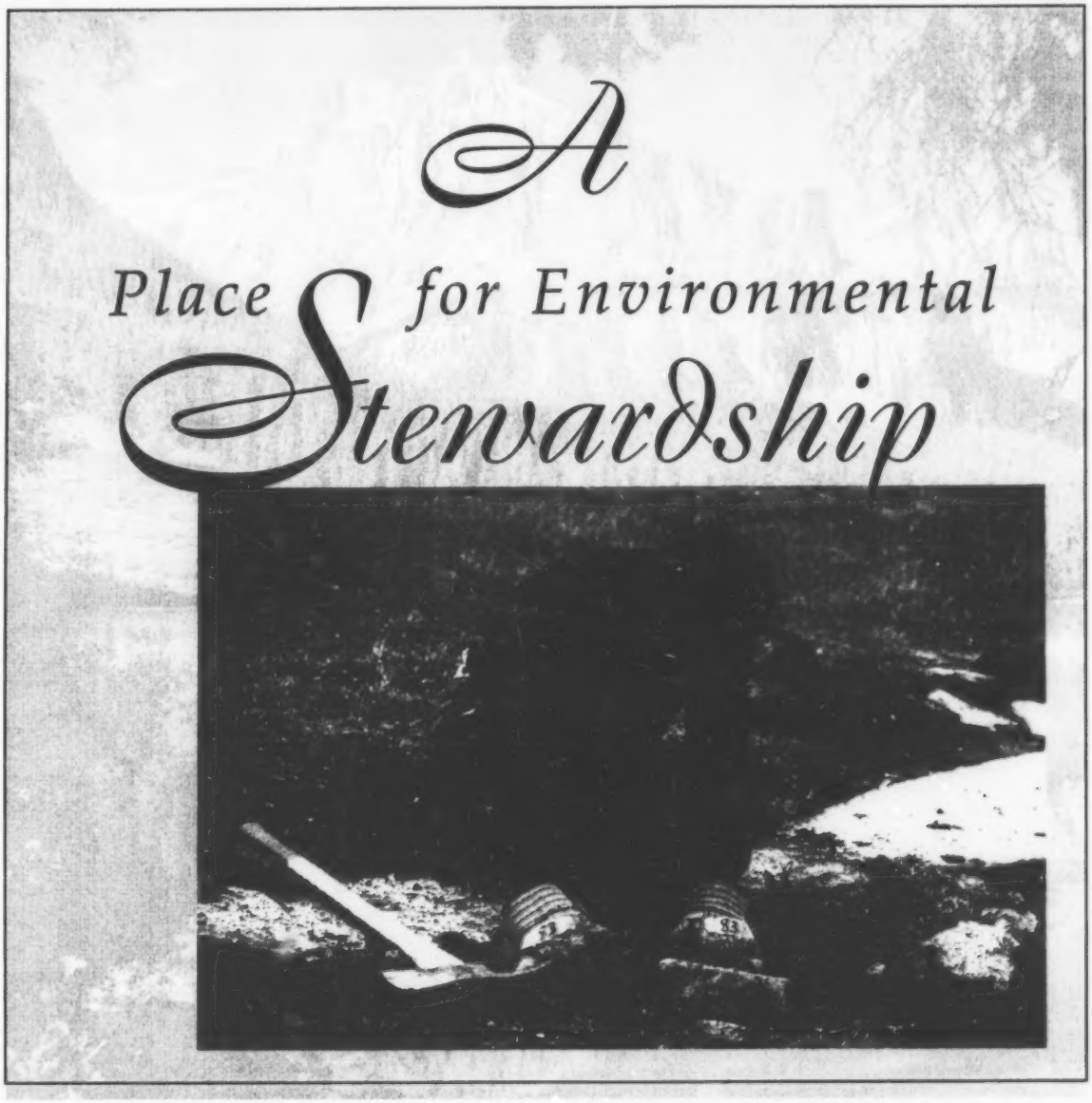
To collect and better integrate Aboriginal traditional knowledge, local knowledge and scientific information into decision-making.

To support research in the park.

8.6.3 Key Actions

1. With other agencies in the Central Rockies and East Kootenays, develop an integrated GIS data base to support research, information sharing and decision-making.
2. Invite the scientific community, non-governmental organizations, and the public to help identify information needs, develop strategies to fill information gaps, and understand results.
3. Set up an interdisciplinary science committee, consisting of academics to help develop an integrated science program and to conduct on-going peer review.
4. Collaborate with others to improve the use of science to support decision-making.
5. Make research and monitoring results widely available.
6. Establish, in partnership with others, programs to fund cultural, ecological, social and economic research.
7. Increase social science research, with emphasis on a systematic approach to the collection of human use data.
8. Collect information about ecosystem changes and the role of people in the mountains over the broad span of time using archaeology, history, and Aboriginal traditional knowledge
9. Refine the park's understanding of baseline ecological conditions for vegetation and critical ecological processes such as fire, forest insects, and disease.
10. Balance the scope of research and management programs to provide more emphasis on poorly understood species including invertebrates, fungi, non-vascular plants, birds, and small mammals.

11. Engage in collaborative research (e.g., Universities and the Canadian Forest Service) to assess current forest health priority issues and the status of native biodiversity.
12. Research shoulder season habitat security requirements for sensitive wildlife.
13. Give priority to multi-disciplinary research.
14. Work with agencies that collect and analyse information for various purposes, including education and environmental assessments.
15. Establish a planning framework to guide research needs .



9.0 A PLACE FOR ENVIRONMENTAL STEWARDSHIP

9.1 Overview

Environmental stewardship reduces the impact of our daily activities on the environment. It is concerned with a range of issues from water quality and energy consumption, to chemical use and contaminated sites. It also includes a wide variety of activities from recycling and reducing resource consumption to restoring disturbed landscapes.

While Parks Canada is responsible for providing leadership in environmental stewardship, effective action requires broadly based support from local residents, businesses and park visitors.

The Government of Canada is committed to the concept of environmental stewardship. This ensures that every government department and agency meets or exceeds environmental laws and regulations, follows the best

environmental practices available, and develops and implements a sound environmental management system. Many of the Government's commitments to the Greening of Government Operations have been formalized through amendments to the *Auditor General's Act* and the appointment of the Commissioner of the Environment and Sustainable Development. As a result, Parks Canada must now report to Parliament on its progress in fulfilling its environment responsibilities.

An environmental management system (EMS) helps organizations and businesses apply environmental stewardship considerations to every business decision. It ensures that the greatest environmental risks receive the highest priority.

9.2 Strategic Goals

Parks Canada demonstrates sound environmental practices in all its activities, services and products.

Environmental stewardship is fundamental to the operation of all businesses and institutions.

Visitors and residents contribute to the principles of environmental stewardship and sustainability.

9.3 Objectives

To improve environmental performance by developing and implementing an environmental management system.

To make environmental stewardship a condition for all new leases, lease renewals and business license applications.

To encourage local residents, businesses, and park visitors to share responsibility for environmental stewardship.

9.4 Key Actions

1. Eliminate any remaining Polychlorinated Biphenyls in the park.
2. Eliminate the release of Ozone Depleting Substances in park operations.
3. Prevent contamination from petroleum storage tanks and ensure they comply with *Canadian Environmental Protection Act* regulations.
4. Employ an integrated pest management system.
5. Apply safe and environmentally responsible management practices to the acquisition, reporting, monitoring, handling, storage, safe use, transportation, and disposal of hazardous waste.
6. Implement the contaminated site strategy, focusing on the clean up of priority sites.
7. Reduce emissions by identifying sources of pollution; minimize activities and products that cause harmful emissions; establish an air quality monitoring program.
8. Reduce gasoline consumption, promote the use of alternative fuels, select new vehicles based on their ability to use alternative fuels.
9. Develop energy management plans for all buildings; incorporate energy efficiency and cost effective technology when building or upgrading facilities.
10. Meet the goal, set by the Canadian Council of Ministers of the Environment, of reducing solid waste by 50% of the 1988 levels (e.g., through purchasing, reuse, recycling, and composting).
11. Ensure the use of surface and ground water does not impair aquatic and riparian systems.
12. Implement a water conservation program for all park and commercial facilities.
13. Purchase products and services that meet environmental specifications; replace as many products and services as possible with others that are more environmentally friendly.
14. Demonstrate responsible environmental management to visitor and other groups by ensuring service and facilities are examples of best practices.

9.5 Sewage Treatment

Releasing effluent into park waters has a variety of consequences. Among the most notable are changes in aesthetic appeal and in the composition of aquatic communities. Adequate sewage treatment reduces the effect of effluent and water conservation helps to reduce the amount of sewage that requires treatment.

A wastewater treatment facility in Yoho serves the community of Field. Two smaller wastewater treatment facilities are located at Emerald Lake and Lake O'Hara. Numerous septic fields and holding tanks are located throughout the park.

Leadership targets for effluent from water treatment plants are provided as goals which Parks Canada will work towards, using the best available technology economically achieveable. An approach to continuous improvement as opportunites rise, will be pursued.

Current federal and provincial guidelines and standards permit some impairment of aquatic environments due to limitations of technology and cost. Leadership targets are set out for the cold and nutrient poor waters in the mountain national parks, in recognition of Parks Canada's mandate to maintain ecological integrity of aquatic environments. To achieve this, higher quality effluent from treatment plants is neccessary. These leadership targets emphasize control of nutrients including nitrogen and phosphorus which are recognized as key factors changing aquatic environments.

9.5.1 Strategic Goals

In the long term, effluent targets match, as closely as possible, the natural composition of receiving water bodies.

Sewage from facilities that are not connected to a treatment plant have minimal environmental impact.

9.5.2 Objectives

To reduce the impact of sewage treatment plants, septic tanks, and other human effluent, on water resources.

To promote water conservation.

To improve our understanding of long range and local, point and non-point-source pollutants and, where feasible, reduce or eliminate contamination.

9.5.3 Key Actions

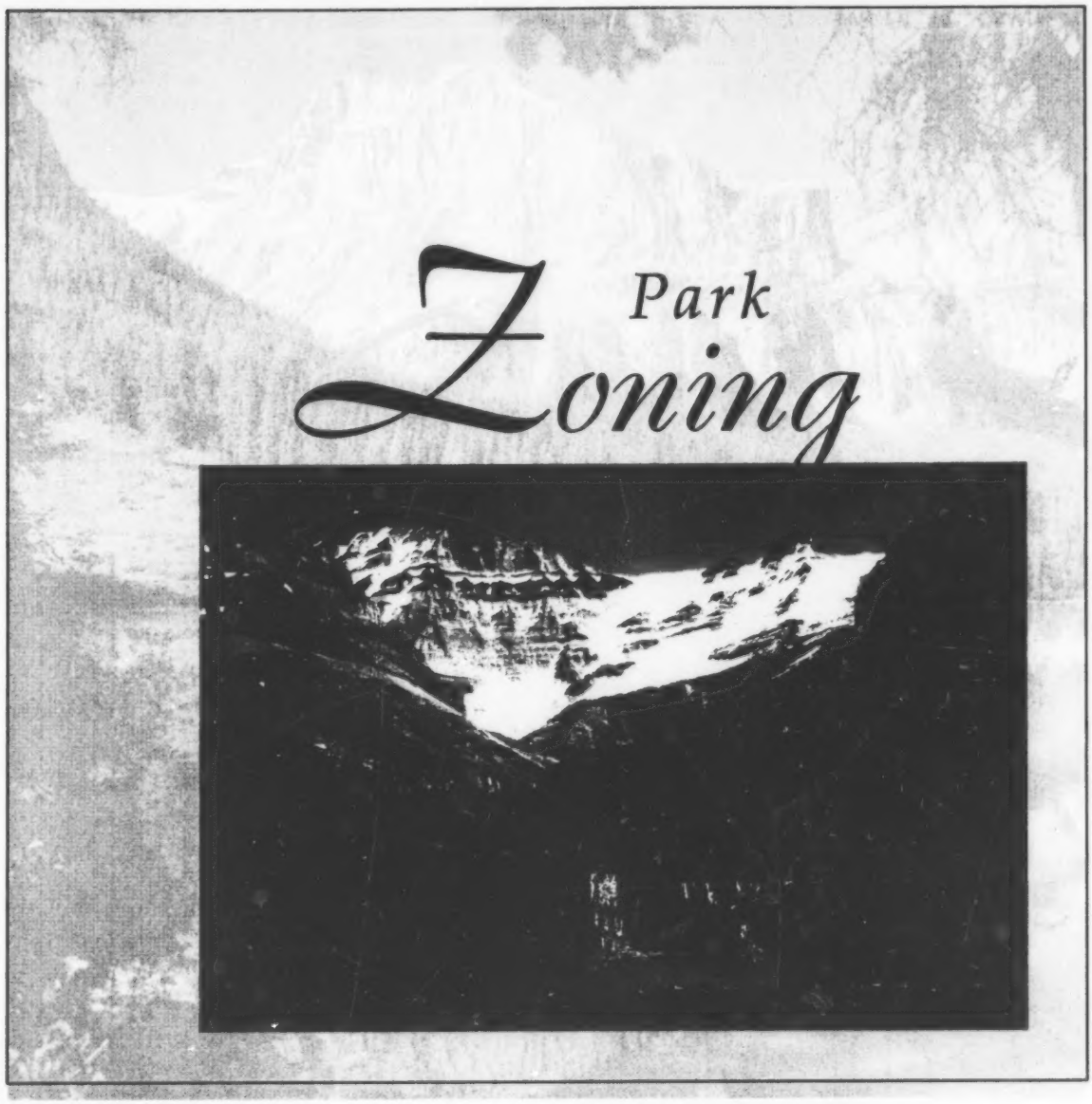
1. Work towards the following leadership targets for water quality at the Field Wastewater Treatment Plant:

Phosphorus		<0.005 mg/l
Faecal Coliform		<20/100ml (end of pipe)
		<2/100ml (end of mixing zone)
pH		meet background levels above outfall
BOD_5		Summer <10 mg/l
		Winter <20 mg/l
total suspended solids		<10.0 mg/l
NH_3N	summer	<1mg/l
	winter	<5mg/l

2. Ensure backcountry lodges and huts, as well as Outlying Commercial Accommodation (OCAs), identify benchmarks, monitor water quality, and introduce corrective measures where necessary to prevent contamination.
3. Monitor the performance of waste water treatment at park facilities, campgrounds, day-use areas, back-country lodges, hostels, and OCAs; take corrective action as required.

4. Develop with partners, a communication program to encourage people to reduce the use of phosphorus.

5. Prepare guidelines and targets for acceptable sewage treatment facilities not connected to a treatment plant.



10.0 Park Zoning

10.1 National Park Zoning System

The zoning system classifies areas according to their need for protection. The suitability of areas for visitor activities is also a consideration in zoning decisions. The system's five categories are described in *Parks Canada: Guiding Principles and Operational Policies* (Parks Canada, 1994).

Large tracts of protected wilderness are becoming a scarce and valuable resource. From an ecological perspective, their importance lies in their ability to support natural processes and to serve as benchmarks. They are critical for animal species with large home ranges and for migrating wildlife.

The National Parks Act provides for the designation, by regulation, of wilderness areas of the park. A high level of ecological integrity is synonymous with wilderness. The intent of the wilderness declaration is to assist in ensuring a high level of ecological integrity by preventing activities likely to impair wilderness character. The perpetuation of ecosystems with minimal human interference is the key consideration in maintaining wilderness character. Only development and activities required for essential services and the protection of the park resources will be permitted in designated wilderness areas. Declared wilderness is one of a range of tools which will be used to ensure the preservation of wilderness value. Human use levels in declared wilderness areas will be managed based on landscape management unit objectives and human use strategies.

Well over 90% of the park lands have beeen recommended for wilderness declaration. Wilderness areas are generally consisitent, but do not coincide exactly with the Zone II areas of the park. For example, utility and service corridors that cut through Zone II areas, and a small Zone II areas between transportation corridors, may not be declared. Appropriate Zone II, and Zone I areas identified in this plan will be declared.

10.2 Zone 1 - Special Preservation (2.36% of the park)

Zone I contains unique, threatened or endangered natural or cultural features, or the best examples of the features representing a natural region. Preservation is the key consideration. Motor vehicles are not permitted. This plan identifies two Zone I areas (Burgess Shale and Ice River Igneous Complex) that were included in the 1988 management plan and extends Zone I to include all Burgess Shale outcrops.

Burgess Shale

The exquisitely preserved fossils of soft-bodied organisms found in the Burgess Shale level of the Stephen Formation are one of the most significant fossil discoveries in the world. Fossil beds in Yoho National Park of Canada will be managed as Zone I - Special Protection areas in recognition of their international significance. Zone I will be extended to include significant fossil outcrops on the Cathedral Escarpment.

Ice River Igneous Complex

The exposed rock strata of Banff, Jasper, Kootenay and Yoho National Park of Canadas is almost entirely sedimentary and metamorphic in nature. The only significant exception to this is the Ice River Igneous Complex, which occurs primarily along the Ice River in Yoho. The Ice River Igneous Complex is the largest and best known intrusive body in the Canadian Rocky Mountains. It forms an S shape 18 km long with an area of 29 km^2. It consists almost entirely of alkaline rocks including sodalite and nepheline syenite. It is also the source of edingtonite and natrolite crystals of exceptional quality.

10.3 Zone II - Wilderness (94.96 % of the park)

Zone II contains extensive areas that represent the natural region and that are conserved in a wilderness state. Protecting ecosystems where there is minimal human interference is the key consideration. Zone II areas offer opportunities for visitors to experience, first hand, the park's ecosystems and require few, if any, services and facilities. In much of Zone II visitors have the opportunity to experience remoteness and solitude. Motorized access is not permitted.

Much of this land consists of steep mountain slopes, glaciers and lakes. Zone II areas cannot support high levels of facility development. Facilities are restricted to trails, backcountry campgrounds, alpine huts, trail shelters and warden patrol facilities.

10.4 Zone III - Natural Environment (0.047 % of the park)

In Zone III areas, visitors can discover the park's natural and cultural heritage through recreational activities that require a few rustic services and facilities. No motorized access is permitted, except for snowmobiles used to set cross country ski tracks and service backcountry facilities and off-season servicing by helicopters.

In the 1988 plans, large areas of Zone III were designated in the Yoho Valley, at Emerald Lake and at Lake O'Hara (see Fig. 4). Zone III allows for uses not appropriate to this area. The size of these Zone III areas has been reduced to reflect existing development and use. No significant changes to existing land use are anticipated as a result of these zoning changes.

Takakkaw Falls: The previous Zone III area extended from the end of the road up the Yoho Valley. Zone III now only includes existing facilities and parking areas at the end of the road. The road itself will remain Zone IV.

Emerald Lake: Zone III has been reduced to cover the north side of the lake and the Lodge.

Lake O'Hara: Zone III now only includes existing facilities around the lake as well as the trail to Elizabeth Parker Hut and the hut itself. The Lake O'Hara road will still remain zone III.

10.5 Zone IV - Outdoor Recreation (2.58% of the park)

Zone IV offers a range of opportunities for understanding and enjoying the park's heritage. Motor vehicles are permitted. This Zone includes frontcountry facilities and park roads.

10.6 Zone V - Park Services (0.027% of the park)

Zone V includes areas where there is a concentration of visitor services and support facilities. The village of Field is the only Zone V area in Yoho. Consistent with the *Field Community Plan*, the size of the community and the area of Zone V has been reduced (see map 3).

10.7 Environmentally Sensitive Sites (ESS)

This designation applies to areas with significant and sensitive features that require special protection. The 1988 plan identifies four environmentally sensitive sites that will continue to have ESS designation.

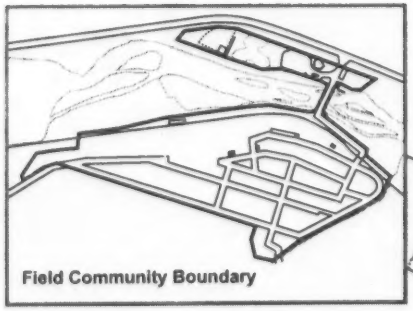
Emerald Lake Vegetation

The Emerald Lake area contains vegetation unique to the four mountain parks. Vegetation associations that include western hemlock, western white pine, western yew and grand fir are found here. Western yew, meadow sedge, bronze sedge and heart-leafed twayblade are species not found elsewhere in the park.

Ottertail Flats, Leanchoil Marsh and Wapta Marsh

These three areas are important wetlands. Montane wetlands are rare in Yoho National Park of Canada and in the Rocky Mountain National Parks in general. These areas support a diversity of species and include nesting areas for Bald Eagle and Osprey and important winter habitat for ungulates.

Map 3
Park Zoning



LEGEND

- Zone I - Special Preservation
- Zone II - Wilderness
- Zone III - Natural Environment
- Zone IV - Outdoor Recreation
- Zone V - Park Services

ZONE I Areas

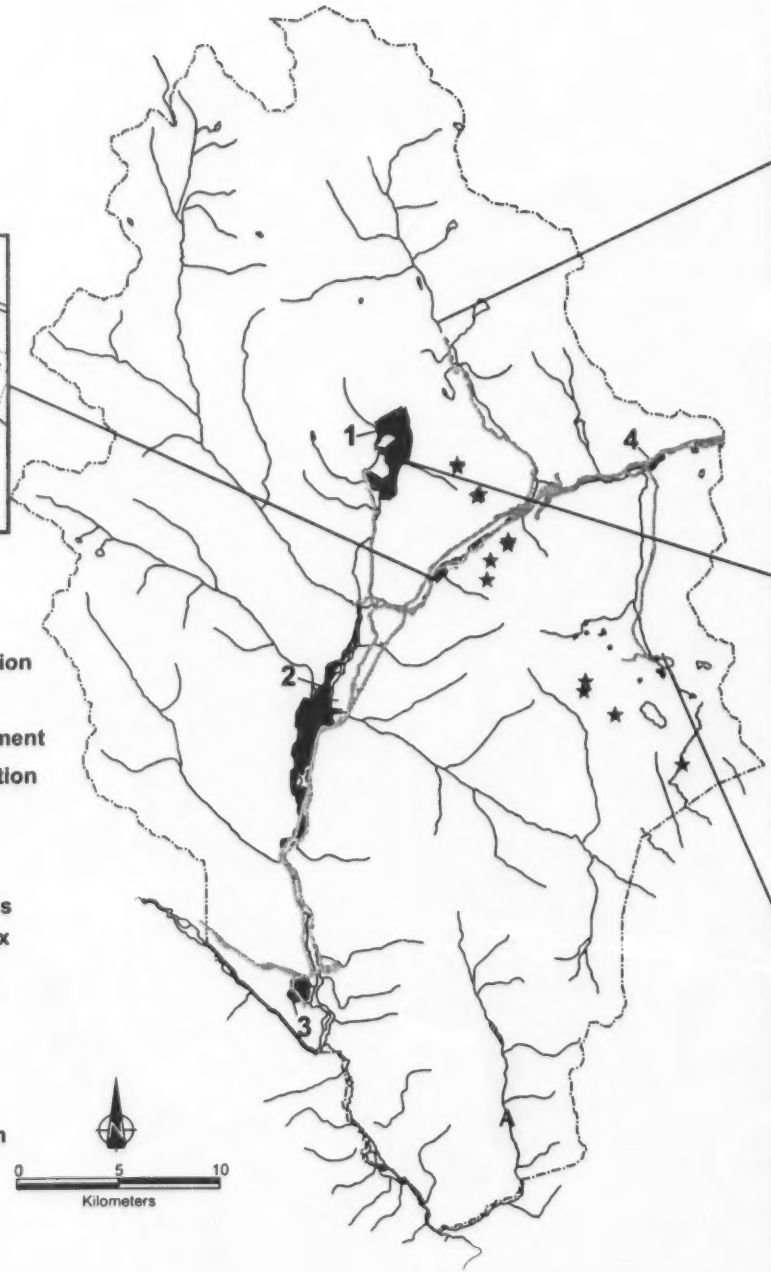
★ Burgess Shale Fossil Sites

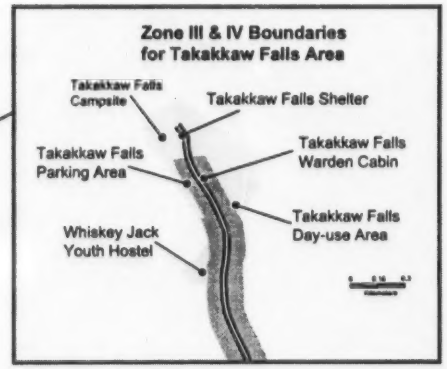
A Ice River Igneous Complex

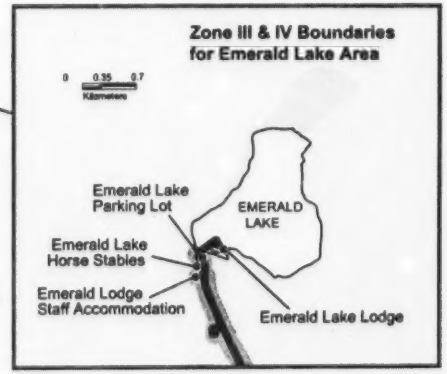
Burgess Shale fossil occurrences found along the Cathedral Escarpment have been included in the Zone I designation

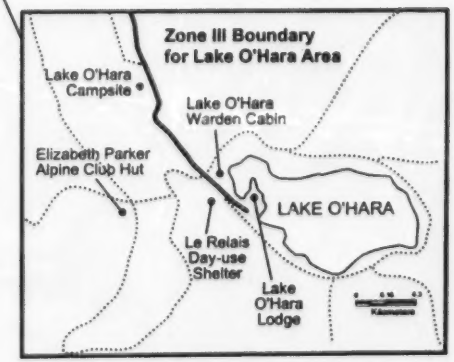
Environmentally Sensitive Sites (ESS's)

1 - Emerald Lake Vegetation
2 - Ottertail Flats
3 - Leanchoil Marsh
4 - Wapta Lake Marsh




Zone III & IV Boundaries for Takakkaw Falls Area
Takakkaw Falls Campsite
Takakkaw Falls Shelter
Takakkaw Falls Parking Area
Takakkaw Falls Warden Cabin
Takakkaw Falls Day-use Area
Whiskey Jack Youth Hostel


Zone III & IV Boundaries for Emerald Lake Area
Emerald Lake Parking Lot
EMERALD LAKE
Emerald Lake Horse Stables
Emerald Lodge Staff Accommodation
Emerald Lake Lodge


Zone III Boundary for Lake O'Hara Area
Lake O'Hara Campsite
Lake O'Hara Warden Cabin
Elizabeth Parker Alpine Club Hut
LAKE O'HARA
Le Relais Day-use Shelter
Lake O'Hara Lodge

Summary of the Environmental Assessment

11.0 SUMMARY OF THE ENVIRONMENTAL ASSESSMENT

The following summarizes the highlights of a separate report "Environmental Assessment of the Yoho National Park of Canada Management Plan 2000".

11.1 Background

The environmental assessment was prepared to ensure the cumulative effects of policies, programs, and proposed actions are understood, and do not contradict the mandate of the *National Parks Act* or ecological integrity.

Settlement, development, transportation and tourism activities over the past century have stressed the park and the regional ecosystem. The issues of greatest concern are:

- landscape fragmentation and loss of habitat connectivity as a result of development and human use in the park and surrounding area
- the effects of non-native species, development, and flow regimes on aquatic and riparian systems
- alteration of vegetation succession due to lack of fire and human modification of the landscape
- wildlife habituation and mortality.

11.2 The Proposal and Its Impact

The *Yoho National Park of Canada Management Plan* proposes many actions to achieve ecological and commemorative integrity while at the same time providing opportunities for the public to understand and enjoy their natural and cultural heritage.

Aquatic Ecosystems

The introduction of non-native fish species, angling, transportation infrastructure, effluent from the community of Field, and visitor facilities—all these activities have altered the park's aquatic ecosystems. The plan proposes ways to restore aquatic biodiversity. These include:

- the re-introduction of native species where appropriate
- minimal manipulation of hydrological process during maintenance of transportation infrastructure
- better wastewater treatment.

Natural Processes

Nearly a century of effective forest fire suppression has substantially changed the park's vegetation. In general, forests are becoming older and less diverse. Important plant communities such as montane grasslands, shrublands, and young forest stands are declining as closed canopy forests become established. Non-native plants compete with native species. Proposed actions include:

- restoring the role of fire as a natural disturbance, except where limited by safety concerns;
- perpetuating the natural range of vegetation disturbance;
- preventing the introduction of non-native species; and
- controlling or eliminating established non-native species, where practical.

Wildlife

Human activity in the regional ecosystem has resulted in loss of habitat, habitat fragmentation, reduced habitat effectiveness, habituation, displacement, and wildlife mortality. The following actions address key wildlife issues:

- habitat effectiveness targets for key indicator species such as grizzly bears
- maintaining or restoring wildlife movement in the Kicking Horse, Amiskwi-Beaverfoot-Kootenay, and Little Yoho-Sherbrooke corridors
- reducing wildlife mortality on the Trans Canada Highway and the Canadian Pacific Railway.

All these actions stress the need to monitor effectiveness, enlist the cooperation of adjacent provincial agencies, communities and other stakeholders, and increase public understanding of human impacts on wildlife.

Visitor Services and Facilities

Parks Canada has made commitments regarding development, appropriate use, and human use management in Yoho National Park of Canada. The *Field Community Plan* defines future development in the community and includes measures to reduce the village's footprint. Human use management will integrate ecological and social objectives. Habitat effectiveness targets will help to maintain secure habitat for large carnivores while providing a range of visitor opportunities. Outside of Field, no new land will be released for commercial or other development within the park. Existing campgrounds will be evaluated and modified, if necessary, to respect ecological integrity or accommodate visitor needs. Limits will be placed on use of both frontcountry and backcountry trails and campsites where that use conflicts with environmental protection goals, particularly regarding carnivores.

Outlying Commercial Accommodation

It is anticipated that the new guidelines for OCAs will result in development lower than previous guidelines.

Heritage Tourism

The management plan calls for a heritage tourism strategy to encourage tourism that is sustainable and compatible with national park values. This will be accomplished by promoting appropriate activities and cultivating an appreciation of the park's natural and cultural heritage. Through a collaborative process involving local/regional businesses, First Nations, and other stakeholders, Yoho National Park of Canada will prepare a heritage tourism strategy within one year.

Open Management

Open management will be achieved by continual public involvement, a new Development Review Process that involves public review, and coordination with regional land managers on research, information management, and decisions that affect the larger region. The plan recognizes the need to improve on existing mechanisms to involve stakeholders.

Environmental Stewardship

Through its Sustainable Development Strategy (1997), Parks Canada is committed to be a leader in environmental stewardship and sustainable development. Yoho National Park of Canada will develop and implement an Environmental Management System with specific stewardship and sustainable development targets and performance measures. The park will report on its achievement to Parliament.

11.3 Cumulative Effects

The management plan's actions address the main ecological concerns facing Yoho National Park of Canada. This environmental assessment does not evaluate individual actions. Instead it considers the combined effect of the actions to determine if the park is moving toward or away from improved ecological integrity.

Cumulative environmental effects are the combined impacts of human activities over time and space. Although an environment may be resilient to a small number of projects, the incremental effect of a large number of stresses arising from many projects and activities may reduce the ecological integrity of landscapes, and even larger regions. The impact of projects may originate at the local level, but tend to accumulate at the ecosystem or landscape levels. In some cases the impact may be so significant that permanent changes result.

The plan supports heritage tourism and addresses key issues related to ecological and commemorative integrity. Actions target identified stresses on important components of the park ecosystem and are intended to reduce that stress or enhance visitor experiences. Some actions will have immediate beneficial effect. Others, such as reclamation of the ecological integrity of the aquatic biome will take many years to accomplish. Restoration of some natural processes such as vegetation succession will take decades to achieve.

The plan sets performance targets and thresholds to protect some key ecological components. For example:

- habitat effectiveness targets for each of the park's landscape management units
- reducing human-caused mortality of grizzly bears to less than 1% of the population per year
- reducing wildlife mortality on roads and railways by 25%
- restoring 50% of the long-term fire cycle—equivalent to approximately 1.75 square kilometres per year
- thresholds and performance measures for 14 environmental components including solid waste, contaminated sites, PCBs, and wastewater treatment.

An integrated monitoring program will assess the success of key actions and identify areas where change required.

It is clear the cumulative effect of the proposals will enhance ecological integrity. Fewer animals will die from accidents or conflicts with people. Habitat effectiveness will improve and habitat fragmentation will decrease. A more normal predator-prey interaction will be possible. The incidence of non-native plant species will decrease. Natural vegetation succession will be enhanced, and the threat of uncontrollable wildfire will be reduced. Visitor stress on the park should be reduced by improved management of people's activities. Development limits are better defined than before; all stakeholders know what the future holds for services and facilities in Yoho National Park of Canada.

11.4 The Policy

As explained elsewhere in this document, ecological integrity "shall be the first priority" in making decisions about the management of national park lands. The importance of ecological integrity figures prominently in the *Yoho National Park of Canada Management Plan*. The vision for Yoho National Park of Canada is consistent with the *National Parks Act* and *Parks Canada Guiding Principles and Operational Policies*.

11.5 Public Input

The preparation of the management plan has offered ample opportunity for public input and expert review. Since the previous plan was approved there have been numerous public surveys pertaining to future management of the parks. The Banff-Bow Valley Task Force (1994-1996) established a round table that represented 14 sectors with an interest in national parks. Parks Canada's response to the Task Force recommendations formed the basis for the 1997 Banff *National Park Management Plan* from which the *Yoho National Park of Canada Management Plan* has taken key policy direction. In the spring of 1999 Parks Canada introduced the *Yoho National Park of Canada Management Plan Concept* for review by the public. This document set out specific management plan proposals and options for future direction. The plan concept was sent to 1,500 individuals at their request, and was discussed with members of the public at open houses.

Parks Canada has analyzed public comments and incorporated suggestions as appropriate. With Ministerial approval of the plan, many components of the plan are be subject to environmental assessment and public review as specific projects are brought forward for implementation.

11.6 Conclusion

The *Yoho National Park of Canada Management Plan* is consistent with national park legislation and policies. Satisfactory peer review and public input have taken place and the proposals have been amended where appropriate. The proposed courses of action are feasible given existing technology. While uncertainties exist with respect to stressors outside the park, the plan highlights the need for more involvement by neighbouring land management agencies and stakeholders.

The environmental assessment finds the proposals unlikely to cause significant negative environmental impact.

The cumulative effect of the plan will be to move towards improved ecological integrity.